A Short Compendium OF CHIRURGERY:

Dl. 4. 38
57/26

CONTAINING ITS

GROUNDS & PRINCIPLES.

More particularly Treating of

IMPOSTHUMES, WOUNDS, ULCERS, FRACTURES & DISLOCATIONS.

ALSO

A *DISCOURSE* of the *Generation* and *Birth* of MAN, very neceſſary to be underſtood by all *Midwives* and *Child-bearing Women.*

WITH

The *Several METHODS* of Curing the *FRENCH POX:* The Cure of *Baldneſs, Inflammation of the Eyes,* and *Tooth-ach:* And an Account of *Blood-letting, Cup-ſetting,* and Blooding with *Leeches.*

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BIBL. CANT. ACAD.

LONDON, Printed by *W. G.* and are to be ſold by *Charles Blount,* at the *Black Raven* in the *Strand,* near *Worceſter-Houſe.* 1678.

Ch. d. 38

86:02

The Preface.

Courteous Reader,

MY Parents having ever destined me to be a Practical Physitian, thought fit to make me begin the Studies thereof by learning *Chirurgery*, probably thinking I might thereby acquire a better knowledge of Mans Body, and its several parts, together with their Functions, as also its outward (at least) Indispositions and Cures, than by only reading such Treatises of *Physiologie* as were then extant, which *Modern Anatomists* and other *Authors* have since found defective.

But in the performance of their juſt deſires I found no ſmall inconveniency, for want of ſome ſhort and compendious Principles, that might give me the Grounds, and an *Idea* of that Art, proportionable to my then mean Capacity, almoſt frighted with the bulk of large and ill digeſted Volumes; but there being no Remedy, I was fain to compile out of them this ſmall Treatiſe, which I have ſince reviewed altering ſome obſolete *Theorems* into new ones, and adding ſome ſmall agreements to render its Reading leſs tedious; And all for my own uſe without any thoughts of ever troubling the Preſs therewith. Theſe late years having brought forth ſeveral ſhort Treatiſes of *Chirurgery*, ſpecially the excellent Principles of

of *Barbetty* and *Hornius*, the former whereof is lately made *English*: but finding in mine some things, which are purposely omitted in theirs, as few dislike their own Productions, I have resolved to make this short *Compendium* Publick, wishing that it may be to the advantage of young Beginners in *Chirurgery*, and to the Health and Welfare of their Patients.

Thine J. S.

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A SHORT Compendium OF CHIRURGERY.

CHAP. I.

THAT part of Physick, which is called in Greek *Therapeutick* is divided into three others; namely, *Diet*, *Chirurgery* and *Pharmacy*: Yet, although this division be needful, these three Sisters, as the Graces, are so connexed and linked together, that it is almost impossible for any of them to perform the least operation, without the help of the two others; but

when they conſpire and are together carefully reduced, in act; a moſt advantagious harmony, for the preſerving and reſtoring of health, doth reſult of their mixture.

Amongſt theſe parts of Phyſick, *Chirurgery* is the needfulleſt, and is therefore by ſome eſteemed the nobleſt, as being the moſt ancient and profitable. It is defined, An Art conſiſting in a methodical application of the Hand on the Body of Man, for the preſerving of its preſent Health, or the reſtoring of it, being loſt. Its Subject is the ſame Body, and its End the Health of it.

The words *Etymologie* is compoſed of the Greek word *Cheir*, that ſignifieth *Hand*, and *Ergia*, *Operation*; which being joyned together make, as it were, a *Handy* or *Manual Operation*.

The whole Art is divided into the *Theoretical* and *Practical* part; the Firſt whereof is deſcribed the ſeconds Guide and Leader, becauſe it contains the *Theorems*, *Demonſtrations* and *Precepts* of it, which the Practical part only reduceth in act, and nevertheleſs hath been ſo much eſteemed, that the Heroes and De-

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my-gods of Antiquity did not disdain to learn it, for it is, as *Vincianus* saith.

Quod Natum Phœbus *docuit, quod* Chyron Achillem;
Quod didicere olim Podalirius *atque* Machaon.

What *Phœbus* taught his Son, *Chyron Achilles,*
What learned *Machaon* and *Podalirius.*

The operations of it are three, *Syntheſis, Diaireſis* and *Exereſis*; whereof the firſt joynes what is ſeparated. The ſecond, ſeparates what is joyned. And the third, takes away what is ſuperfluous. And theſe Operations are to be ſoon, ſurely, and pleaſantly performed, with Manual or Medicinal Inſtruments, according to certain Indications drawn from the things, 1. *Natural.* 2. *Not-natural.* 3. And againſt *Nature.*

Chirurgery is ſoon performed, when no occaſion of doing the ſick perſon good is neglected. *Surely,* if uſing of known Remedies, we prevent a relapſe, and avoid all worſe diſeaſes than the former. And

Pleasantly, if, amongst Remedies, those are first made use of, wherewith we may obtain our ends, with less molestation of the Patient.

Those things are called *Natural*, which do enter in the composition of mans Body, and although its first ingredient may be the universal matter of *Cartesius*, out of whose particles, variously figurated and moved, according to the variety of their figures and motions, those bodies do arise which though they be not the very first, nor can be demonstrated absolutely simple in their dissolution, yet because they are of the first order of sensible Bodies, whereof others are composed, they may commodiously, by a Chirurgion, who is an Artist of sensibles, be conceived in the Body of Man as its 1. *Elements*, whence do arise its 2. *Tempers* or *Complexions*. 3. *Humours*. 4. *Parts* or *Limbs*. 5. *Faculties*. 6. *Actions*. And 7. *Spirits*. Whereunto, 1 *Age*. 2 The *Sex*. 3 *Colour*. 4 *Commoderation*. 5 The *Season* of the *Year*. 6 The *Clime*. 7 And *manner of Living* are annexed.

Elements are single Bodies, out of which the mixt are composed, and into

which

which they may be resolved, but they in none of a singler composition. They are reckoned four. 1 *Fire.* 2 *Air,* 3 *Water.* 4 And *Earth,* Whose number and station, *Ovid* hath thus expressed.

Quatuor Æternus Genitalia corpora Mundus
Continet, ex illis, duo sunt onerosa, suoque
Pondere in inferius, Tellus atq; Unda feruntur;
Et totidem gravitate carent, nulloque premente,
Alta petunt Aer, atq; aere purior Ignis.
That is,
The Eternal World four Bodies comprehends
Engendring all, The heavy *Earth* descends,
And *Water* clog'd with weight; Two light aspire,
Depress'd by none, pure *Air,* and purer *Fire.*

Which the Antient thought to evince by the Argument of mixt Bodies dissolution, Thus given by *Dubartas.*

Cela ſe voit a locil dans le brulant Tiſon,
Son feu court vers le Ceil, ſa natale Maiſon,
Son air vole en fumé, en cendre chet ſa terre,
Son eau boult dans ſes nocuds, &c.

That is perfectly ſeen, when burning
wood doth ſend
Its *Fire* to heaven, the place from
whence it did deſcend,
Its *Air* then flies in ſmoak, its *Earth* in
aſhes falls,
In its knots *water* boyls, *&c.*

But the weakneſs of this Argument is plainly diſcovered by the learned *Boyle* in his *Chymiſta Scepticus*; ſo that, as we ſaid before, Theſe *Elements* can at moſt be reckoned but amongſt the firſt Claſſes of mixt Bodies.

The *Elementary* qualities are alſo four, Namely, 1 *Heat.* 2 *Coldneſs.* 3 *Moiſture.* 4 *Drineſs.* Whereof the two firſt (though all act in ſome meaſure) compared to the latter, are called *Active*; the two others *Paſſive.*

1. *Fire*, is of a hot and dry quality.
2. *Aire*, of a hot and moiſt.
3. *Water*,

3. *Water*, of a moist and cold.

4. And *Earth*, of a cold and dry.

Temper or *Complexion*, is a proportion of the four primary Qualities, arising from the mixture of the *Elements*. But if we consider the universal matter, it may be defined, A moderation of the Particles endued with contrary Qualities. There are four single Tempers. 1 *Hot*. 2 *Cold*. 3 *Moist*. 4 *Dry*. And four compos'd, 1 *Hot* and *Moist*. 2 *Hot* and *Dry*. 3 *Cold* and *Moist*. 4 *Cold* and *Dry*. Whereunto is added another, called in *Greek* εὐκρατον, that is, *Temperate*, which is distinguished, 1. In a *Temper* accrording to *weight*, when the *Elements* are both in *mass* and *quality* so proportioned, that none can be said to predominate. 2. And in another according to *justice*, which consisteth in a *temperature* convenient for the exercising of all necessary actions.

This *Temper* is either of the whole body, by reason of which Males are said to be hotter then *Females*, or of the several parts, whose Rule is this, whatsoever is *Red* in the Body is *Hot*; whatsoever is *White*, *Cold*; that which is *Soft*,

is *Moist*; and that which is *Hard*, *Dry*. Whence it follows, That whatsoever is *Red* and *Hard*, is *Hot* and *Dry*, as the *Heart*; whatsoever is *Red* and *Soft*, is *Hot* and *Moist*, as the *Flesh*; What is *White* and *Hard*, is *Cold* and *Dry*, as the *Bones*; and what is *White* and *Soft*, is *Cold* and *Moist*, as the *Brains*.

Childhood, comprehending the first five and twenty years of our age, is of a hot and moist temper. From thence Youth, proceeding to five and thirty or fourty years, of a hot and dry; Manhood, consisting in the ten or fifteen next years, is esteemed cold and dry; and thence Old age, till our lifes end, is more or less said to be cold and moist, or according to others, cold and dry; its moisture being but accidental and excrementitious, though God can yet extend our life to a long durance, as the *German* Poet *Freinshemius* elegantly expresseth.

Ist schirr nichts ubzig mehr, als seelen voller schnen,
Als leber voller Thod, als leiber voller plag,
Als zeiten voller qual, als zungen voller klag.

Als

Als hertzen voller angſt, als augen voller trahnen.

That is,

Though nothing but a ſoul full fraught with longing fears,
Be left, a deathful life, a body full of pain,
A time full of diſtreſs, a tongue but to complain,
A much oppreſſed heart, and an eye full of tears.

The Spring is temperate, Summer is hot and dry, Autumn cold and dry, and Winter cold and moiſt. The Spring begins when the Sun enters the Sign *Aries*, and continues as the other ſeaſons, with ſmall difference do, ſome three months, whilſt the Sun runs through as many Signs of the *Zodiack*, whoſe number and order *Virgil* thus deſcribes.

1 2
Primus adeſt Aries, Taurus inſignibus auro
3 4
Cornibus, & Fratres, & Cancer, aquatile ſignum,
5
Tum Leo terribilis Nemeus, atq; innuba Virgo. 6 *Libra*

7 8
Libra subit, caudaque animal quod dirigit ictum. 9 10
Armatusq; arcu Chyron & Corniger Hircus, 11 12
Fusor aqua simul & fulgenti lumine Pisces.

The name of Humor is given to whatsoever is perceived flowing in the Body of a living Creature endued with blood. The same is, *first*, Natural; or, *secondly*, against Nature. The Natural is again divided into primary and secundary, alimentary and excrementitious.

The alimentary or nourishing humors were constituted by the Antients four in number; 1. *Blood.* 2. *Phlegm.* 3. *Choler.* 4. *Melancholly.* But the Modern esteem that *Blood* only is a fit nourishment of the Body, and that the other humors flowing with it, whereunto they have added the *Lymphatick* and *Pancreatical* Juice, do only contribute to its effervescency or temperature, as will be said hereafter, amongst whcih humours there is no melancholy, except the thickest and grossest part of the Blood as is found in the *Atrabiliary Capsules*, or is evacuated by the *Hem-*

Hæmorroids, be taken for it. But before we expound how blood is produced, let us hear how the Ancients did conceive it; It is thus expreſſed by the *Daniſh* Poet, *Arocuſis*.

Du Mauge, gode Kock, din mad ſaa vel foꝛ kꝛyder,
At deraf, koꝛtar hid, en kꝛaftig ſaft ud flyder,
Som Du til Lektueren, vid middel aaren, ſender,
Jnarings meening Shy, hun den til blod fozvender,
Ocs giffuer det igieu, naar ſaften ny yder,
At ſamme ferske blod til alle Lemmer flyder,
Ued aarr gangr krum, &c.

That is,

Thou Stomack, gallant Cook, thy meat ſo well doſt dreſs,
That of it in a trice, thou canſt a juice expreſs
Full of craft, which is then ſent, by the middle Vein,
To th' Liver, that it may the dye of blood obtain,

Whence

Whence it is given out, when th' other
sap is wanting
And is seen through our Limbs, a free
passage attempting
By crooked Channel-Veins, *&c.*

This was the Antients meaning, but the Moderns have found, that the aliments being well chewed in the Mouth, are by the *Oesophagus* transported into the stomack, where by the virtue of some acid liquors, proceeding from the reliques of the former Concoction, and the Vapours of the *Pancreatical* juice, together with the subtil descending from the *Maxillar Glandules*, they are fermented, agitated and calified, almost in the same manner, as mettals are dissolved by *Aqua fortis*. In the mean time the aliments, helped by the warmth of the neighbouring parts, do often contract a spontaneous heat, as we see sometimes hay, too freshly brought in, whereby they are digested, which being done, the stomack straightning it self, and opening its lower orifice, called the *Pilorus*, they are thrust down to the *Duodenum*, where by an effervescency arising from the mixture of *Choler*, de-

descending thither by the *biliary* conduit, together with the *pancreatical* juice, and *Phlegm* sticking to the Bowels, they are segregated, and their grossest parts precipitated down to be expelled at the seat; whilst the subtilest, called *Chylus*, are transported by the milky Veins, to the common receptacle, where being diluted by the *Lymphatick* humor, the *Chylus* is carried by the *Thoracick* conduits to the *subclavicular* branch of the *Vena cava*, where it is mixt with the Blood, descending from the Head and other superiour parts; of whose Nature and Colour it begins then to partake, without coming to the Liver, which therefore can neither be the seat nor organ of *Sanguification*.

The *Chylus* thus mixt with the descending Blood, being come into the trunck of the *Vena cava*, is mingled with the Blood which ascends by the same Vein, from the inferiour parts, and is transmitted into the right Ventricle of the Heart, where it suffers an effervescency arising from the mixture of the *Lymphatick* spirit, and the *lixivious* salt of Choler, communicated to the Blood,

out

out of the Gall by the *Hepatick* conduit, whereby the fiery parts of each being freed of their hindrance, do insinuate themselves in the oily parts of the blood, which they rarify, whereby the *Valvules* of the *Vena cava* are shut up, and the Blood thus rarified, craving a larger room than before, the Heart is compell'd to its expulsion, which it effects by the collected fibres, as another muscle, and the *Valvules* of the *Arterial Vein* being opened it is transported into the Lungs, cooled by *Respiration*, whereby the Heart and the said Vein is unswell'd, and the Blood is conveigh'd by the usual Artery, whose *Valvules* are then open, into the left Ventricle of the Heart, where it is again heated and rarified, and being carried by the *Aortal Artery*, whose *Valvules* then give passage, into the greatest Arteries, and from thence into the smaller, the Heart and the said Arteries leave swelling, and the Blood is thence received by the *Anastomoses* in the Veins, from whence it proceeds, through the *vena cava*, into the right *Ventricle* of the heart, repeating so a continual circulation, a *perpetuum mobile* during our Life.

Blood

Blood is temperate, of a mean thickneſs, *Red* in colour, and of a ſweet taſte, it ſerves inſtead of fuel to the vital heat, which it conveys to the ſeveral parts, to whoſe nutrition and increaſe it alone contributes.

The Antients did divide it into *Venal* and *Arterial*, though the place of their flowing be their chief difference.

Phlegm is of a watry nature, liquid, whitiſh and unſavoury, it ſerveth to the *Effervescency* in the *duodenum*, tempers the Blood, and renders the Joynts ſlippery.

Choler is of a fiery nature, a thin conſiſtence, a yellow colour, and a bitter taſte, it cauſeth an *Effervescency* in the *duodenum*, and another in the Heart, as aforeſaid; it provokes the expelling faculty, and thins all *Phlegm* ſticking to the inward parts.

The *Lymphatick* humour is of a pure watry ſubſtance, without any colour, and of a ſubacid taſte. Its uſes are manifold, but the chief are to promote an eaſier flowing of the *Chylus*, and to convey the blood through the *thoracick* conduit to the Heart, and there contribute thence

to its Effervescency, it tempers the Blood and perhaps, together with *phlegm*, moistens the articulations of the Joynts.

According to the *Antients*, *Phlegm* predominates from *Midnight* till *Sunrising*; *Blood* from that time till *Noon*, thence *Choler* obtains the superiority till *Sun-setting*, and they gave the remaining time till *Midnight* to *Melancholy*; which we have said to be nothing but grosse *Blood*.

Phlegm is also more copious in *Autumn*, *Blood* in the *Spring*, *Choller* in *Summer*, and *Melancholy* or thick *blood* in *Winter*.

They esteemed also *Phlegm* to be moved every day, *Choler* every third day, and *Melancholy* every fourth; supposing the *Quotidian Ague* to be caused by *Phlegm*, the *Tertian* by *Choler*, and the *Quartan* by *Melancholy*, which *De Graff* attributes to the various Obstructions of the lateral branches of the *Pancreas*; In his Treatise *De succo pancreatico*.

The signs of a Bloody Complexion, are a red colour in the Face, a moist heat through the whole Body, fleshy Muscles, great Veins, and a chearful Heart.

Cholericks are of a yellowish colour, a light

a light disposition, and a lean Body; they are witty and liberal, but wrathful and revengeful.

Phlegmaticks are pale, of a soft flesh, sometimes fat, lazy, sleepy and dull.

Melancholick or thick blooded men have a blackish face, and a sad look, they are sorrowful, obstinate, fearful and covetous, but withall very capable of doctrine.

The *Arabs* instituted four secundary *Humours*, whereof they called the first *Innominate* or *Implanted*, which they supposed to be conteined in the extremities of the little *Veins*, where it begun to take some alteration of the several parts. They called the same *Daw*, when (as it were) it bedewed them. *Gluten*, when it stuck fast to them; and *Cambium*, when it was wholy converted into their substance, but the nutrition and increase of the several parts is better expressed by the *Moderns*, as will be said, when we speak of Functions.

When the *Primary humors* exceed the bounds of their due qualities, they are deemed againſt nature, and they may be corrupted in the Veins or out of them.

Phlegm, corrupted in the Veins, is of a *sower* or *salt* taste, and of no colour; but out of the Veins, it is distinguished in *muscous*, *watry*, *plastry* and *glazy*, whereunto the *Lymphatick* humour, the *salive*, and the *Pancreatical juice* may be conveniently referred when they are vitiated.

Choler, corrupted in the Veins, is called *vitellin*, or like the yolk of Eggs, which the Antients esteemed to be produced by an intense heat, but is more truly atributed to the mixture of some *acid humour*, as can be perceived when a little spirit of *Vitriol* is powred into some Gall; it often degenerates in *Poraceous*, *rusty*, and *glasteous*, according to its degrees of *acidity*.

The *Melancholy* humour or thickest Blood, is by some thought to turn by *adustion* into *black choler*, but according to *Regnerus de Graaf*, this last proceeds from the mixture of *Choler* with a too *acid pancreatical juice*, whereby it is turned into a *greenish black colour*, as the Antients describe the *atrabiliary* humour.

The *Excrementitious* humours are also 1. *Phlegm.* 2. *Choler.* 3. *Melancholly.* 4. And, *Serum.*

They

They are called *excrementitious*, because they can yield no nouriſhment to the Body, and therefore are expelled,

1. *Phlegm*, not to the Brains, as the Antients conceived, but to the *Maxillar Glandules*, and thence through the Mouth and Noſtrils out of the Body.

2. *Choler*, by the *Cyſtick arteries* to the Gall, whence the ſuperfluous part is expelled to the *Duodenum*, and thence evacuated at the Seat.

3. *Melancholly*, which is not attracted by the *Spleen*, as the *Antients* ſuppoſed, but is an Excrement of the groſſeſt Blood, which is often evacuated by the *Hæmorrhoides*, and is alſo ſent to the *Atrabiliary Capſuls*, to be, perhaps, voided with the *Urine*, which therefore appears ſometimes of a black colour.

4. *Serum*, which is either evacuated,

Firſt, In the form of *Vapours*, by *tranſpiration*, whereby, according to *Sanctorius*, more than the half part of our *Aliments* are diſſipated.

Secondly, Or in the conſiſtence of *Urine* which being ſeparated from the bloud in the *Kidneys*, and filtred through the *Papillar Caruncles* into the *Pilorus*, is

powred through the *Uriters*, into the *Bladder*, and having received the thinneſt, and moſt ſerous part of the *Chylus* immediately from the Stomack, by the *Gaſtrick Vein*, is thence evacuated out of the Body.

To *Serum*, is alſo referred *Sweat* and the *Tears* we ſhed.

A *Part* or *Limb* is defined, *A Body adhering to the whole, and partaking of the ſame life with it, being created for the exerciſing of certain Functions.*

They are diſtinguiſhed in *Similaries* and *Diſſimilaries*.

A *Similary* part, is that, which *cannot be divided in other parts of a different ſpecies*; and it is twofold, *Spermatick* and *Carnal*.

1. The *Spermatick* are conſtructed in the firſt conformation of the body, out of the groſſeſt part of the Seed.

2. The *Carnal* out of the *Menſtrual-Blood*.

The *Similary* parts are Eleven in number.

1. *Bones*.
2. *Tendrels*.
3. *Ligaments*.

4. *Ten-*

4. *Tendons.*
5. *Membranes.*
6. *Fibres.*
7. *A threefold fleſh* (the *Muſculous*, the *Parenchyme*, and the *Glandules.*)
8. The *Skin.*
9. The *Veines.*
10. The *Arteries.*
11. And the *Nerves* or *Sinews.*

The *Bones* are joyned either by,

I. *Diarthroſis*, or Articulation with ſome motion, either by

1. *Enarthoſis*, when there is a conſiderable quantity of the Bone received in a large Cavity.

2. *Arthrodia*, when the receiving cavity is but Superficiary.

3. *Ginglime*, when a Bone receives and is received.

II. *Symphoſis*, or Coalition without Motion.

1. *Sutures*, as in the Bones of the Head.

2. *Harmony*, as in the Bones of the Noſe and upper Jaw.

3. *Gomphoſis*, as the Teeth.

And they are bound either by,

Firſt, *Syncondroſis*, or with a Tendrel.

Secondly, *Syndeuroſis*, or a Ligament.

Thirdly, *Syſarcoſis*, or with ſome fleſh or muſcle.

Note that to the exerciſing of the *Similary* parts *Functions*, there needs only their due *temper* and *commoderation*.

A *Diſſimilary part* is that, *which may be divided in parts of a different Species*, Many do confound them with the *Organical*. Nevertheleſs there is this difference, that all *Diſſimilary* parts are *Organical*, but not all *Organical*, *Diſſimilary*; for the Bones, Veins and Arteries are *Similary*, and yet produce *Organical* actions.

Four conditions are requiſite to the perfect exerciſing of the *Diſſimilaries* actions: namely,

1. A due *Conformation*.
2. *Magnitude*.
3. *Number*.
4. And *Conjunction*.

Whereof the laſt comprehends two others, to wit, *Seat* and *Connexion*.

Theſe

Theſe parts are diſtinguiſhed in, *Firſt*, *Containing*; and *Secondly*, *Contained*.

And then again, in 1. *Common*; and 2. *Proper*. Diſtinguiſhed in 1. *Nobles*; 2. *Ignobles*.

Firſt, The *Noble* or principal parts, diſtributing the Spirits and Faculties to the whole Body, are abſolutely neceſſary to it. They are three; *Viz.*

1. The *Brains*.
2. *Heart*.
3. *Liver*.

Which being excepted, all the reſt are *Ignoble*, as being ſubſervient to them, and they are the other parts of 1. the *Head*. 2. *Trunk*. And 3. *Joints*.

1. The *Head*, is divided in the *Scul*, and *Face*; the common containing parts whereof are, the thin and the hairy *Skin*, the fat and the fleſhy *Membrane*; Its proper parts are the *Scalp*, or *Pericrane*, the *Perioſte*, the *Muſcles*, the *Bones*, and two *Meninges*.

The contained parts of it are the *Brain*, the *After-brain*, and the *Marrow*.

The ſecond hath in its upper part the *fore-head*, in the lower, the *mouth*, and the inſtruments of the *Senſes*, as the *Eyes*,

the *Eares*, the *Noſe*, *&c.*

2. The *Trunk* is diſtinguiſhed in the *Breaſt* and lower *Belly*, the proper containing parts of the firſt, beſides, the *Muſcles*, *Bones*, &c. Being the *Pap*, the *Midriff*, the *Pleure*, and the *Mediaſtin*.

The contained are either *Bowels*, as the *Heart*, with its *purſe*, the *Lungs*, a part of the *Weazon* and of the *throat*; or *Veſſels*, as ſome branches of the *Vena Cava*, and great *Artery*; ſuſtained by the *thymus* in the *Throat* and ſeveral *Sinews*.

The *lower Bellies* proper containing parts, are the *Muſcles* of the *Paunch*, and the *Belly-rim*.

The contained are either employed to *Nutrition*, namely to *Chyliſication*, as the *Stomack*, the *Kall*, the *Sweet-bread*, the *Guts*, and the *Meſentery*; or to *Sanguification*, as the *Meſaraick Veins*, the *poſt Vein*, and the *Cava*, the *Liver*, the *Gall*, the *Bladder*, and the *Milt*.

3. The *Joints* are divided in the *uppermoſt*, containing the great Hand, namely the *Arm*, that is, the Shoulder, from the upper ſhoulder to the Elbow; and the Cubit from the Elbow to the Wriſt. The leſſer Hand, divided in the

Wriſt

Wriſt between the Cubit and the Palm, and the fiſt between the Wriſt and the beginning of the Fingers, whoſe inward part is called the *Palm*, and the outward, the *Back* of the *Hand*.

The *undermoſt* contain the great Foot, comprehending the *Thigh*, from the *Britch* to the *Knee*, the *Leg* from the *Knee* to the leſſer foot, which is divided in the Foot, *Pedium*, *Metapedium*, and *Toes*.

Before we come to *Faculties* and *Functions*, it will not be amiſs to ſay what the *Soul* is.

They define it *The ſubſtantial Form of a living Body, and the inward principle of the actions thereof.* For,

The Soul *a Subſtance and a Spirit is,*
Which God *himſelf doth in the Body make*
Which makes the man, for every man from this
The Nature of a Man, and Name doth take.

Its connexion with the Body is called *Life*, and its ſeparation *Death*: Neither is this laſt greatly to be feared of a *Chriſtian*,

stian, since it is but a passage to a better Life, and that, as saith the *Italian* Poet.

Altro mal non ha morte chél pensar a morire,
E chi morir pur duce, quanto piu tosto more,
Tanto piu tosto al suo morir sinvola.

A *Faculty* is a certain disposition of the Body, whereby it can do something, though it may be, it doth it not, so that it is *only a power of acting*.

Its division is needless, since it is but one power, though it produceth several actions, according to the Vacuity of its Organs.

A *Function*, is described, the exercise of a *Faculty*, and is only distinguisted in *Natural* and *Animal*, *Pulse* being referred by the *Moderns* to sanguification, whereof we have spoken in the *Theorem* of *Blood*, and *Respiring* to motion, of which will be said hereafter.

The *Natural Function* is divided in,

1. *Nutrition.*
2. *Growth.*
3. *Generation.*

To the first whereof the *Antients* made four

four others to be subservient; for as *Dykes* saith of the *Soul*,

Here she attracts, and there she doth retain,
Here she decocts, and doth the food prepare,
There she distributes it to every Vein:
And here expels what she may fitly spare.

Yet the *Moderns* do exclude from thence all *similary attraction* and *retention*, *Deglution* being performed by *Detrusion* only; the several parts of the *Mouth*, the *Tongue*, the *OEsophague*, &c. contributing thereunto; *Retention* being also effected by the Oblique Fibres of the Stomack; but *Hunger* is produced by the sourish Vapors of the *acid* in the Stomack, which do gently *Vellicate* its upper Orifice, and the apparent cause of *Thirst* is the want of moisture.

To *Concoction* three others are subordinate.

1. *Chylification.*
2. *Sanguification.*
3. *Assimilation.*

The

The two firſt whereof, together with *Expulſion*, are explained in the deſcribing of *Humours*, ſo that only Aſſimilation and Growth are here to be expounded, which take thus.

When the *Arteries* begin to ſwell, as aforeſaid, the particles of the Blood, which in them are convey'd to the roots of certain *filaments*, iſſuing from the ends of the ſmalleſt *Arteries*, whereby they compoſe the *Bones*, *Fleſh*, *Skin*, &c. according to the various manner of their application and contexture, or directed by the ſame *Plaſtick* virtue whereby the ſaid parts were formed, which they nouriſh, ſomething diſtending them, and intruding themſelves in their vacancies; where they remain, when the *Arteries* return to their former ſtate.

And *Growth* is likewiſe effected: The pores of the matter of Childrens Bodies being eaſily extended, whereby ſome particles of the Blood, a little greater than thoſe whoſe places they fill, may enter and ſubſiſt therein, which cannot be longer done, when their Limbs are grown more ſolid.

Generation is a *Function*, *whereby a man*

man produceth another like to himself, whereunto the *Antients* did subordain two others,

1. *Alteration.*
2. *Conformation.*

Which the *Moderns* do rather attribute to the *Plastick* virtue of the *Seed*, though denyed by *Rhegius* and other *Cartesians*, who affirm, That the particles of the *Seed*, moved by its own heat, and that of the *Uterus*, because of their various figures, are necessarily turned into the Brood of an animal, whereunto they since attribute the whole formation of the *Fœtus*, without the Function of any intellectual faculty directing it.

The *Animal* function is divided in,

1. *Principal.*
2. *Moving.*
3. *Sensitive.*

Whereof the first comprehends these three, *viz.*

1. *Imagination*, whereby all Objects Species offered to the external senses are perceived and discerned.

2. *Reasoning*, whereby a man discourseth and understands.

3. *Memory*, whereby the Species of things

things perceived, conceived and understood are preserved, whereof will be further spoken in the period of *Sensation.*

Motion is thus performed, The most *vivid* and quickest particles of the *Blood*, such as we may conceive the *Vital Spirits*, do ascend from the left *Ventricle* of the Heart, through the *Caroties* and *Cervical Arteries*, into the Cavities of the Brain, where they are turned into a subtile flame or wind, usually called the *Animal Spirits*, which being driven by grosser particles, do not enter in the *Pineal Glandule* (*Steno* having shewed us how unapt it is thereunto) but in some (yet unknown) more convenient place of the Head, whence they sally out into the Cavities of the Brain and the pores of its substance, to be thence conveyed into the Nerves, where they have a power (which the learned *Willis* calleth *Elastick*) to change the figure of the Muscles, and so move the whole Body.

To this manner of moving *Respiration* is also to be referred, for the *Muscles* of the *Thorax* drawing it up, the *Lungs*,

to

to avoid vacuity, are extended, whereby their ſmall cavities are opened, and receive the inſpired Air, which is again excluded in expiration, when the Lungs following the reſtriction of the *Abdomen*, their ſaid *Cavities* are again ſtraightned.

The *Senſitive Function*, is the exerciſe of the five external *Senſes*, which comparatively to certain Beaſts, are compriſed in theſe two Verſes.

Nos Aper Auditu præcellit, Aranea Tactu,
Vultur Odoratu, Lynx Viſu, Simia Guſtu.

That is,

The Bore excels in Hearing, and the Spider
By ſence of Touch, is a ſubtil divider.
The Vulters Smell, th' Apes Taſte, and Lynxes Sight,
Exeells the Man by far, that ſolid Wight.

Their reſpective Inſtruments are,

1. The *Eyes* of *Seeing* in the *Retinâ*.
2. The *Ears* of *Hearing* in the *Auditory Nerve*.
3. The

3. The *Nose* of *Smelling*, not through the *Os Cribriforme*, which is not pierced as the *Antients* conceived, but by the *Apophyses Mammillares*, or the extremities of the *Nerves*.

4. The *Tongue* of *Tasting*, by the *Papillary eminencies*, noted by *Bellinus*, whence Savours are conducted to the *Filaments* of the 4 and 7 *pair* of the *Nerves* that end there.

5. The *Skin* of *Touching*, by the *Pyramidal papils*, observed by *Malpigius*, and esteemed the extremities of the *Nerves* of the *sixth pair* ending in it.

Sensation, is performed as followeth, When the small *Filaments* of the *Sinews* are in the least moved by the Objects of the senses, they draw to them the parts of the *Brain* from whence they take *Origin*, whereby they open some pores of the inward *superficy* of it, through which the *animal Spirits*, being derived into the *Nerves* and *Muscles*, do excite those motions, which we perceive our senses, being thus or so affected, which is to be understood of all *Sensation*; and if the said spirits, having the Impression of some *Idea* conceived or also discerned

in

in ſome fit place of the Brain (as *Carteſius* eſteemed the *Pineal Glandule*) do often paſs through the ſame pores of the Brains texture, they do dilate them ſo, that the Objects being abſent, they may be repreſented to the Soul, whence *Memory* doth depend. But if opening one or more of them, ſome others are dilated, *Reminiſcency* is effected; and if the traces of the *Ideas* are conveyed by the ſmal Arteries to the heart, and diffuſe their beams throughout the maſs of Blood, it may thence proceed, that the *Foſter* is ſometimes noted with certain markes.

Sleep is a *Ceſſation* of *Motion* and of the *External Senſes*, and is produced, when the Braines ſubſtance is not ſufficiently diſtended by the Spirits aforeſaid, or when it is overwhelmed with Vapours; for in theſe caſes it falls together, and oppreſſeth the Nerves of the ſeveral Senſes, that their Objects cannot be transmitted. And *Dreams*, which happen during Sleep have their origin, partly from the inequality of the Spirits iſſuing from the Souls *Domicil*, and partly from the occurring impreſſions of *Memory*.

Spirits are defined, *A thin, invisible, æthereall and most quick substance, arising from the subtilest parts of the Blood, to be the Vehicle of all necessary actions.*

The *Antients* did divide it, in

1. *Implanted.*
2. *Adventitious.*

Whereof the first is denyed by some who conceive it impossible, that the same cause acting in the same manner should last so long, and produce so many and often contrary *Functions.*

They were formerly divided as the *Faculties* were, in

1. *Natural.*
2. *Vital.*
3. *Animal.*

But *Sylvius de le Boe*, admits none but the *Animal*, and other *Moderns* the *Vital*, under which they comprehend the *Natural* and the *Animal*; taking the subtilest parts of the Blood, arising from the left *Ventricle* of the Heart, for the first, which are turned in the Brains into the *Animal*, serving,

First, To sundry motions of the Soul and Body.

Secondly, To the exercising of the in-

terna

ternal and external *Senſes.*

3. To the alteration of *Humours.*

Native Heat is a proper and ſpecial quality to all animated creatures, whereby they live and exerciſe their functions, uſes, and neceſſary operations.

Thus I think to have briefly explained, not only the Natural things, but alſo their Annexes, except the manner of living, which if it be watry and moiſt, is obnoxious to diſeaſes of that temper; but if it be hot and dry, the contrary muſt be expected.

In ſum, it appears by the Premiſes, that the Body of Man is a *Microcoſme*, compoſed of ſeveral parts, wonderfully effigurated, and adorned with ſundry Functions, created to be for a certain time, the *Domicil* or dwelling place of the *Rational Soul*, ſo that not without cauſe, the *German* Poet exclaimes,

O Edles wundertheir, zur weicheit auſerkohreu,
Voll geiſt, voll luft, voll got, vom himmel ſelbſt gebohreu,
Du Herr, du Eben bild, und auſzug allerwelt,

Der unter ics den lauff der hohen sterner stelt,
Du weise Creatuur, &c.

O thou noble Animal, wonder to wisdom chosen,
Full of Spirit and God, from Heaven it self rosen.
Thou Lord, Type, and extract of the whole Univers,
Disposing under thee the course of the high stars,
Thou creature full of Wit &c.

Those things are called *not natural*, which do not enter in the Bodies composition, but by a right use whereof it may long be maintained healthful and sound.

They are,

1. *Air.*
2. *Eating* and *Drinking.*
3. *Motion* and *Quiet.*
4. *Sleeping* and *Watching.*
5. *Repletion* and *Evacuation.*
6. The *Passions* of the mind.

In the administration of all which we ought to consider,

1. The

1. The *Quality.*
2. *Quantity.*
3. *Manner* of *Using.*

A *free*, *open*, *ſerene*, and *thin Air* is to be eſteemed the beſt; as alſo the *Eaſt* and *North* Winds; but the *South* and *Weſtern* are held unwholſom.

The ſimpler our *diet* is, the healthfuller it is to be eſteemed; for as *Horace* ſaith, the variety of meat is very noxious, *viz.*

——— *nam variæ res*
Ut noceant homini credas, memor illius eſcæ,
Quæ ſimplex olim tibi ſederit, at ſimul aſſis
Miſcueris elixa, ſimul conchilia turdis,
Dulcia ſe in bilem vertent ſtomachoq; tumultum
Lenta feret pituita; vides ut pallidus omnis
Cœnâ deſurgit dubiâ.———

That thou mayſt know how various things offend,
Think but what ſingle meat did once defend

Thee from approaching hunger, but
at last,
Roasted with boyld, and Birds with
Shels thou hast
Together mixt; In *Choler* what is sweet
Will turn it self, and thy *Stomack* surfeit
With slimy *Phlegm:* Consider then how
pale
Each riseth from his Seat, and doubtful
Meal.

Meats affording a good juice, and substance, are doubtless the wholsomest, and nevertheless, in expending them, the sicknesses nature, the strength, age, and labour of the Patient are to be perspicuously considered, whereunto an inveterate custom is to be added: for Country Men and Labourers convert meats of an easy digestion into *Choler*, but extract a laudable substance of a courser diet, and thus,

Consuetudo valet, longos mansura per annos,
Illaque Naturam, vires si sumpserit, æquat.

A constant use a second nature proves,
And if increast, with equal force it
moves. Neither

Neither did the *Antients* neglect Order in Eating, for they esteemed that what was easily decocted, should enter first into the *Stomach*, and that *Lubrick* meat ought to precede those that are *Astringent* : But it is now believed that those niceties may be omitted, since the *Aliments* are all converted in one mass, whence the *Chylus* is afterward separated. Whereunto I shall only add these two Verses of *Drinking*.

Aut nulla ebrietas, aut tanta sit, ut tibi curas,
Eripiat, si quæ est inter utrumque nocet.

Be never Drunk, or so much let it be
As to asswage thy Cares; else 'twill hurt thee.

Motion comprehends all kind of exercises; the same ought to be moderate, and we ought to leave it when *Sweat* begins to break out through the *Pores*: for immoderate Labour weakens the Body, and is very pernicious, as *Ovid* saith of himself.

Me quoque debilitat ſemis immenſa Laborum,
Ante meum tempus cogit & eſſe ſenem.
Otia corpus alunt, animus quoque paſcitur illis,
Immodicus contra, carpit utrumque labor.

Continual Toyl weakens my weary Limbs,
And makes me Old before my time become:
Body and Mind, by Reſt are fed, it ſeems,
But too much Work precipitates their doom.

Sleep, as we ſaid before, *Is a ceſſation from motion and ſence*, whoſe *Office* is the reſtoring of the Bodies former ſtrength. Its proper time is Night, an hour or two after Supper.

The firſt lying not being firſt on the Right Side, as many believe, but on the Left, where the bottom of the Stomach is and the meat ought to lye, and about morning, when concoction is ended on the Right; neither ſhould it exceed the ſpace of *Eight hours*; wherewith, if ſome are not ſatisfied, certainly the ſooner,

Longa

Longa quieſcendi tempora fata dabunt.

The Fates will give ſufficient time to ſleep.

Dreams do in ſome manner indicate what excretion will be in the *Criſis*, for if red and fiery, they preſage a Cholerick one; if moiſt and watry, a Phlegmatick.

Moderate watching quickens the ſenſes, and diffuſeth heat and blood through the whole Body. But if it be immoderate, it weakens the ſame, dries up the Spirits, and ſpoiles the brains Temperature.

Repletion is either of *quality* or of *quantity*.

The firſt is ſeen in the *Hectick Feaver*, or *Maraſmus*.

The ſecond hath a relation to the containing parts, and is meaſured by their diſtention; or to the Bodies ſtrength, when the ſame is fuller of humours than it can well bear.

The repletion of a ſingle humour is called *Cacochimy*; that of more *Pletora*.

Evacuation, in the ſtricteſt ſence, *Is an effu-*

effusion of such humours as are superfluous and hurtful, and is either of the whole body, chiefly performed by *Phlebotomy*, *Sweat* and *Purgation*, or of the several parts, by their respective Conduits, as the *Brains*, by the *Eyes*, *Nose* and *Eares*, the *Lungs* by the *Wind-pipe*, &c. In all *Evacuation*, three things are to be observ'd and considered, The *Quantity*, *Quality*, and manner of *Excretion*, *V. g.* The *Empieme* being opened, the excluded matter ought to be answerable in quantity to that which is included. The most laudable is *white*, *even*, and as little *stinking* as may be. And lastly, all must be purged out at one time, least the Patient suffer too great an Effusion of Spirits.

The Passions of the Soul, or Perturbations of the Mind, are very prevalent to alter the Bodies Constitution; for as the Banished Poet saith,

Unda locusque nocent, & causa valentior istis,
Anxietas animi; quæ mihi semper adest.

The

The Sea and place do hurt, but yet I find
Agreater Cauſe, the torment of my mind.

We wil therefore briefly expound their Effects.

A moderate *Joy*, dilates the heart, and diſtributes abundance of Spirits to the Face, and other parts; it helps Concoction, and renders our habitude more chearful, and pleaſant.

Anger or *Wrath* performs the like effuſion, but much more rapid and ſwift. It kindleth ſometimes the Humours ſo much, that it makes them apt to receive a ſharp volatile Salt, which is thought the cauſe of *putrid Feavers*, and produceth alſo other Symptoms; yet it may be profitably uſed, to quicken the natural heat, and render it more active, when it is almoſt proſtrated.

Sorrow and *Fear*, draw heat and blood ſuddenly to the Heart, whence the forces do preſently fall, and ſometimes death immediately follows, the Vital Faculty being overwhelmed with Blood and Spirits.

This I conceive ſufficient, ſince all other

other Paſſions of the mind may be referred to theſe three or four.

Thoſe things are termed againſt nature, which may procure the deſtroying and ruine of the Body.

They are the cauſe of Diſeaſes, Diſeaſe it ſelf, and its Accidents, or Symptoms.

The *Cauſe* of a *Diſeaſe*, is, *whatſoever doth any way contribute to the being, or increaſe of it*. Which, though Phyſitians give them many diſtinctions, may nevertheleſs all be referred to the *efficient*, eſpecially divided in 1. *External*, 2. *Internal*; For, Alas! How many things may extinguiſh our light.

The humours within us maintain an equal fight; and leaſt it be too long, Death hath a Pike, a Ball, a Sword, a Knife, a Stone and an Arrow, to cut our feeble thred, *&c.*

The *External* Cauſe cometh from without; the *Internal* hath its ſeat in the Body, and is either,

1. *Antecedent*, that yeilds aptitude to a ſickneſs.

Or, 2. *Conjoyn'd*, which immediately, and of it ſelf perfects it.

They are alſo co-ingendred with the Patient,

Patient, or have acceſſe to him after his Birth.

A *Diſeaſe* is, *A diſpoſition againſt Nature immediately, and of it ſelf, hurting the actions.*

The ſame is *Simple* or *Complicated.*

The *firſt* is, when there is no plurality, or compoſition of Diſeaſes.

The *ſecond*, When it is followed of many Symptoms, or when the Cauſe is ſo connexed with it, that it may be lookt upon as a particular Sickneſs.

Diſeaſes are of a threefold ſpecies.

1. *Intempery.*
2. *Evil Conformation.*
3. *Solution of Continuity.*

The *firſt* is, an Indiſpoſition of the Similary parts, cauſed by the exceſs of a ſingle Humour or the Exuberance of more; The laſt whereof is called *naked*, or *conjoyned* with a Vice of the ſame *Humours*, and is termed *equal*, as being equally ſpread throughout the whole Body, or *inequal*, as affecting only ſome particular part of it.

There are four ſorts of evil Conformation. Namely in,

1. Fi-

1. *Figure.*
2. *Magnitude.*
3. *Number.*
4. *Scituation.*

Solution of *Continuity* is a common Diſeaſe, of the *Similary* and *Organical* parts, which hath ſeveral Names, according to the places where it is incident; For in the Fleſh it is called *Helcos*, in the Bones, *Cathagma*; in the Nerves, *Spaſma.*

The *Symptoms* of a Diſeaſe are the *Effects* and *Productions* of it; *To wit,*

1. *A hurt action,* (that is 1. *Aboliſhed.* 2. *Diminiſhed.* Or, 3. *Depraved.*)

2. A *Vice* in the Bodyes Habitude.

3. *Vitiated Excretions.*

Of the aforeſaid *Precepts* are collected two Intentions.

1. What is to be done.

2. And if it may be done.

But the *third* belongs to Art, *viz.* How it muſt be done.

The *Practice* whereof is better declared in the Words annexed, and the follow-

following Chapters, that do briefly comprehend what doth belong to a Chirurgeon.

The *Indications* are of three first and principal *Species*, *viz.*

I. The first is drawn from the natural things which do Indicate their conservation, by the use of things like to themselves, and of this kind are the Indications drawn from,

1. The strength and forces of the *Patient*, which to preserve, the proper Cure is often to be delayed, for without them, the Chirurgeon can effect but little.

2. His *Temper*, *viz.*
   1. *Sanguine.*
   2. *Cholerick.*
   3. *Phlegmatick.*
   4. *Melancholy.*

3. The *Habitude* of his *Body.*
   1. Soft and delicate.
   2. Lean or Fat.
   3. Tall or Short.

Least he lose that *Symetry* which Nature hath allotted him.

4. The Condition and Nature of the part

part affected. Wherein we consider,

1. Its *Substance*, whether if *Similary*, it be,
   1. *Hot.*
   2. *Cold.*
   3. *Moist.*
   4. *Dry.*

   If *Organical*,
   1. *Principal*,
   2. Or *Ignoble.*

   If it be,
   1. Of a *quick Sense.*
   2. Or *Stupid* and *Dull.*

   And lastly, its
   1. *Form.*
   2. *Figure.*
   3. *Magnitude.*
   4. *Number.*
   5. *Connexion.*
   6. *Action* or *Use.*

5. The *Age*; for many Diseases cannot be Cured in Old Age.

6. The *Sex*, for Women are easier purged than Men.

7. The *Season* of the *Year*, for Hot meat is convenient in Winter, Cold in Summer, Moist in Autumn, and Dry in the Spring.

8. The

8. The time of the Diſeaſe, for what is convenient in the beginning, is not ſo in the progreſs, ſtate or end.

II. The ſecond is drawn from the things not *Natural*; Which do *indicate* their Alteration; as if *Air* does conſpire with *Nature* againſt the *Diſeaſe*, it ought to be kept; otherwiſe, it muſt be altered.

III. The third is taken from the things againſt *Nature*, which *indicate* their *Ablation*, and are,

1. The *Cauſe* of a Diſeaſe.
2. The *Diſeaſe* it ſelf.
3. The *Symptoms*.

Which do often *indicate* contrary things; but then this is the Rule.

When there is *Complication*, the firſt *Remedies* ought to take away,

1. The moſt *Dangerous*.
2. The *Cauſe*.
3. That without which nothing can be done. As,

1. *Loſs of Blood.*
2. *Fluxion.*
3. *Intempery.*

A SHORT
Compendium
OF
The PRACTICAL Part
OF
CHIRURGERY.

CHAP. II.

Of Impoſtumes.

HAving thus far treated of ſuch *Theorems* and *Inſtitutions*, as are wholly neceſſary to be known of all Wellwiſhers to *Chirurgery*, let us now

ſay ſomething of the Practical part thereof, ſince it is almoſt impoſſible to treat perfectly of the *Theorical*, unleſs the ſame do give ſome urgent occaſion of it, and in this it reſembles the three Parts of *Curative Phyſick*, that can hardly be ſeparated from one another, for as a *French* Poet doth intricately ſay;

Quand un Cordier cordant veut accorder ſa Corde,
Pour ſa corde accorder, trois cordens il accorde,
Mais ſi un des cordons de la Corde diſcorde,
Le Cordon diſcordant fait diſcorder la Corde.

When a *Ropemaker* makes a *Rope*,
Of ſmaller *Ropes* he twiſteth three,
But he cannot attain his *Hope*
If *One* of them do *diſagree*.

We ſhall then divide this ſmall Treatiſe into ſix other Chapters.

The *Firſt* whereof ſhall give the general Documents of *Impoſtumes*.

The *Second* of *Wounds*.

The

The *Third* of *Ulcers.*
The *Fourth* of *Fractures* and *Dislocations.*
The *Fifth* of the *Generation* and *Production* of *Man.*
The *Sixth* of the *Venereal* Disease.
The *Seventh* of some other *Indispositions* that are Cured by *Chirurgery.*

An *Impostume* then is defined, *A Disease*, composed of three others.

1. *Intempery.*
2. *Evil Conformation.*
3. *Solution* of *Continuity.*

The general Causes of it are,

1. *Fluxion.*
2. *Congestion.*

The subordinate ones of the first whereof are commonly,

1. A lower scituation of the part affected.
2. The Soreness of it.
3. Its Heat, caused by a two violent motion.
4. The outward *Proximity* of some hot Body.
5. Or the application of sharp medicaments.

The Cauſes of *Congeſtion* are two, namely a defect of Aſſimulation in the Diſeaſed part.

2. The infirmity of the *Expulſive Function.*

The difference of *Impoſtumes* are manifold, but they are chiefly taken of their quality, whereby they are termed great, of a mean greatneſs, or little.

Or of the part affected, as *Opthalmys* in the *Eye*, *Varices* in the *Legs*.

Or of their Accidents, as their *Sorenes*, whence they are called *painful*, *ſmarting*, *inſenſible*, &c.

Or of their Colour, by reaſon of which ſome are called *red*, *white*, *livid*, *yellow*, &c.

But the chiefeſt and moſt neceſſary difference is that which is taken from the matter whereof they are compoſed, which the following Diſcourſe will more clearly manifeſt.

The Matter of *Impoſtumes* is either,

I. *Natural*, Which is,

1. *Hot*, as *Blood*, whence is made a true *Phlegm*; Or,

Choler, whence a true *Eriſipelas* is produced.

2. *Cold*,

2. *Cold*, as *firſt Phlegm*, whence riſeth a true *OEdema*.

Secondly, *Melancholy*, whence is made a *Schirrus*.

II. Or *Againſt Nature*, which is either *Firſt*, *Blood*, whence are made,

1. *Carbuncles*.
2. *Antraces*.
3. *Gangrena*.
4. *Iſtiomene*.
5. *Sphacelus*.

Secondly, *Choler*; whence are produced,

1. *Herpes*, of the thickeſt.
2. *Herpes miliares*, of the thinneſt.

Thirdly, *Phlegm*, whence ariſe,

1. *Wateriſh*,
2. *Windy Impoſtumes*.
3. *Scrophulæ*.
4. *Knobs*, &c.

Fourthly, *Melancholy*, whence are engendred,

1. A ſpurious *Schirrus*,
2. All kinds of *Cankers*.

The ſigns of a *Sanguine Impoſtume* are pain in the diſeaſed part, the heat of it, its redneſs, and tention.

Coldneſs, *ſoftneſs* and a leſſer pain indicates a *Phlegmatick* one.

A *yellowiſh* and *pale Colour*, and a ſmarting pain, ſheweth it to be *Cholerick*.

And *Tenſion*, *Hardneſs* and *Lividity*, with ſome pain by fits, do manifeſt that it is cauſed of *Melancholly*, or thick Blood. The Antients believed alſo that they had the *Paroxiſms*, and moving time of ſuch Humours as they are made of.

Thus the indiſpoſition of an *OEdema* was more intenſe from midnight till Sun-riſing; a *Phlegmon* more painful from Sun-riſing till Noon; thence to Sun-ſetting, an *Eriſipelas*; and a *Scirrhus* or *Canker*, from that time till Midnight.

Concerning the *Tregnoſticks* of *Impoſtumes*, thoſe that are cauſed of cold humours or thick Blood, are of a longer Curation, and ſuch whoſe matter is againſt nature, are healed with greater difficulty, than thoſe cauſed of a natural one; whereunto you may add ſuch as turn themſelves in *Schirres* and *Knobs*.

There is to be conſidered in all *Impoſtumes* four times. *viz.*

1. Their

1. Their *Beginning.*
2. *Augmentation.*
3. *State.*
4. *Decreaſe.*

The *firſt* whereof is, when the part beginneth to ſwell and pain.

The *ſecond* when the ſwelling pain, and other accidents do increaſe.

The *third*, when they receive no augmentation.

The *fourth*, when they do decreaſe.

They are commonly termined in four manners, namely,

1. By *Reſolution.*
2. *Suppuration.*
3. *Induration* of the part,
4. Or by its *Corruption* and *Gangrene*; which is worſt of all.

The Signs of reſolution are an itching of the diſeaſed part, with the ſlacking of *Pulſation*, *Tenſion*, *Heat*, and other accidents.

Thoſe of *Suppuration* are the greatneſs and vehemency of the Feavour, *pain*, *pulſation* and *heat.*

A *diminution* of ſwelling and pain, and a hardneſs left in the affected part do *indicate* its *Induration.*

And

And when the accidents of *heat, pain, pulsation* and *tension* are greater, than they use to be in *Suppuration*; when the pain ceaseth suddenly, without any manifest cause, if the part grows *livid* and *blackish*, and lastly if it *stinkes*, *Gangreen* is more than fully signified.

The first *Indication* in the Cure of all *Impostumes*, is the prohibiting of *Fluxion* by *repelling* and *intercepting* Remedies.

The *second* is an *evacuation* of the matter causing it, whether it be by *resolution*, *repulsion* or *suppuration*.

If it be caused by *Congestion*, then the part is to be *corroborated*, and the accidents *corrected*; taking alwayes the *Indication* from the most urgent.

We ought in this *Cure* to observe three things, namely,

Whether the matter causing the *Impostume* be ready to *Flow*, *Floweth*, or is yet *Impacted* in the diseased part.

In the beginning of all *Impostumes*, we ought alwayes to use *repelling* Remedies, unless it be,

1. When the matter is *venenous*, *thick*, *slow*, *viscous* or *deep hidden*

2. When

2. When the *Abceſs* is *Critical.*
3. The *fluxion* near the Noble parts.
4. And falleth on too weak a Member.
5. And laſtly, when the Body it ſelf is wholly *Plethorical.*

A *Chirurgeon*, being but the *Helper* of *Nature*, ought chiefly in the *increaſe*, *ſtate*, and *declination* of *Impoſtumes*, to attend what ſhe aimeth at, whether it be to *reſolution* or *ſuppuration*, without forceing her to a contrary motion, when that which ſhe intends is not wholly *pernitious*: Whereunto to attain I have here added the Deſcription of ſome *Cataplaſms*, wherewith one may perform all neceſſary *Intention* in the general *Cure* of *Impoſtumes.*

The matter cauſing them is *diſcuſſed* and *repelled* by the following *Cataplaſm.*

Recipe, *Barley meal, the Juice of Houſe Leek, and Plantain, of each, two Ounces, powder made of Pomegranate rind, and of wild Granate Flowers, with a like quantity of Roſes, two Drachms, Oyl of Mirtle, and Roſes, of each an Ounce; make a Cataplaſme.*

They

They are *Resolved* by this.

Recipe, *Mallows, Marshmallows, of each three handfulls; let them boyl, adding thereunto Barley meal two Ounces, ordinary Honey one Ounce, Oyl of Camomile and Melilot, of each an Ounce and half; make a Cataplasme.*

The following brings them to *Suppuration.*

Recipe, *The Roots of White Lillies, and Marshmallows, the Leaves of Mallows, Pellitory and Grounsel, of each one handful, let them be boyled in Metheglin, stamped and sithed, add to them Powder of Linseed two ounces, Swines fat, and Oyl of Lilies, of each an Ounce and a half; Make a Cataplasme.*

And this last mittigates the pain of them when it is too intense.

Recipe, *Crums of White bread dipped in luke-warm Milk a pound and half, Yolkes of Eggs three, Oyl of Roses two Ounces, and one Scruple of Saffron, make a Cataplasme.*

Note,

Note, that though this be the general Cure of *Impostumes*, they have nevertheless a more proper and particular one according to their several differences, but this is as 'twere a Rule whereby to proceed in it.

CHAP.

CHAP. III.

Of Wounds.

THE General Practice of *Impoſtumes*, being ſufficiently treated of in the former *Chapter*, this ſhall be adapted to expound ſuch Notions, as belong to the Cure of *Wounds*, whereof this is the Definition.

A Wound is a Solution of Continuity cauſed by an external Inſtrument, in any part of the Body, but the Bones.

Their *Cauſes* are all ſuch things as may violate the outward circumference of the Body, and unnaturally enter in it; and they are either animated, as the biting, and ſtinging of Beaſts, or inanimated, as Swords, Darts, Bullets, *&c.*

The difference of *Wounds* is manifold, and as *Samoicus* ſaith,

Tam

Tam varia humanæ ſunt vulnera conditionis,
Ut nequeant proprias cunctis adſcribere curas.

The *Wounds* of *Men* are ſeen ſo manifold
The proper *Cure* of each cannot be told.

Nevertheleſs I have endeavoured to include the moſt General in the following *Paragraphs.*

The *Differences* of *Wounds* are drawn either,

I. From the nature of the *wounded* part, which is,

Firſt, Similary, and that

1. *Soft,* as the *Glandules* and *Fleſh.*
2. *Hard,* as the *Griſtles.*
3. *Mean,* as the *Membranes* and *Ligaments.*

Secondly, Diſſimilary, which is either,

1. *Principal,* as
   1. The *Brains,*
   2. The *Heart.*
   3. The *Liver.*

2. *Mi-*

2. Miniſtring to the principal, as
   1. *Aſpera Arteria*,
   2. The *Lungs*.
3. Neither of the foreſaid, as
   1. The *Eyes*,
   2. The *Hands*.
   3. The *Feet*.

II. From their own *Eſſence*, whereby they are termed,

Firſt Simple, when there is no Complication of other *Diſeaſes* or *Accidents*.

Secondly Compoſed, when there is ſome other *Diſeaſe* or *Accident indicating* a peculiar Curation.

III. From their *Quantity*, by which they are termed,

Firſt, Great, that is,
   1. *Long*,
   2. *Broad*,
   3. *Deep*.

Secondly Mean in all *Dimenſions*.

Thirdly, Little, that is,
   1. *Short*,
   2. *Narrow*,
   3. *Superficious*.

IV. From their *Figure*, whence we call them,

1. *Straight*,

1. *Strait*,
2. *Round*,
3. *Crooked*, &c.

When a *Wound* doth pierce the Skul, is known by these following Signs.

The wounded party doth presently fall, lying without sense, as if he were asleep; the Excrements are not retained; and surely, if the blood floweth by the Ears, Nostrils, or the Mouth, and if he Vomits *Choler*, &c.

Whether the *Wound* penetrates into the *Thorax*, is known, if the *Air* cometh forth at the *Wound*, with a difficulty of *Respiration*, if there be a *gravative* pain on the *Diaphragme*, which is caused by much *Blood* lying on that part, that must afterward be rejected by coughing. A little after cometh a *Feaver*, and stinking breath, the Patient can lye but on the Back, and hath a perpetual desire of *Vomiting*; it often degenerates in a *Fistula*.

When the *Lungs* are hurt, there issueth a *Spumous Blood* at the *Wound* with *Coughing*; there is a great difficulty of *Respiration*, and pain of the *Sides*.

We know the *Heart* to be *Wounded*, by the great quantity of *Blood* that cometh out at the *Wound*; by a trembling of the whole *Body*, a little *Pulse*, a *Paleness* of the *Face*, and a cold *Sweat*, and frequent *Swoonings*, a coldness of the *Extremities*, and a hasty *Death*.

When the *Diaphragme* is hurt, there is a *gravativ* pain in that part, with *Phrensie*, difficulty of *Breath*, *Cough* with a sharp pain, and a contraction of the flanks upwards. These signs appearing, one may pronounce Death to be near.

The *Vena Cava* or great *Artery* being hurt, Death speedily followeth, because of the great loss of *Blood* and *Spirits*, whence the *Function* of the *Heart* and *Lungs* do cease.

When the *Medulla Spinalis* is wounded, a *Paralysis* or *Convulsion*, presently hapneth, the motion of the lower part is abolished, the Excrements of the *Belly* and *Bladder* either flow unwittingly, or are wholly suppressed.

The *Liver* being wounded, there cometh a great deal of *Blood* out at the *Wound*, and a *Pungitive* pain is felt as far as

as the *Cartilage Xiphoides*, which Death often followeth.

When the *Stomach* is wounded, the meat and drink cometh out at the *Wound*, then come Sweats and Cold of the extremities, fore-runners of Death.

If the *Spleen* be wounded, there floweth a blackish blood at the Wound, *Thirst* troubleth the Patient, with a pain of the left side, and the blood flowing into the *Belly*, causeth many accidents, and often Death.

The *Gutts* being wounded, a great pain torments the *Bowels*, the Excrements issue out at the Wound, and sometimes the *Gutts* out of the *Abdomen*, which afterwards pain and swell.

When the *Kidneys* are hurt, there is a great pain in making *Water*, the *Blood* coming out therewith, and the pain stretching it self to the *Yard* and *Testicles*.

The *Bladder* and *Ureters* being wounded, the pain reacheth to the *Flanks*, the parts of the *Nombril* are extended, the *Urine* cometh out bloody, and sometimes out at the wound.

When the *Womb* is hurt, the *Blood* com-

eth out at the *Privities*, the ſame accidents appearing as when the *Bladder* is wounded.

The *Nerves* being prickt or half cut, a ſharp pain is felt in the wounded part, with a ſudden inflammation, fluxion, tumor, feaver and convulſion, often with gangrene and death; unleſs it be remedied in time.

Thoſe *Wounds* are eſteemed dangerous, which do affect ſome principal Sinew, Vein, or Artery; Whereunto are added thoſe that are inflicted in the Privities of Man or Woman, or in their parts dedicated to natural excretion; as alſo thoſe that hurt either end of any muſcle; but ſuch as are in the fleſhy parts, according to the length of the fibres are eſteemed the leaſt conſiderable.

If a Bone, Sinew, Tendrel, or a portion of the Face, or Prepuce be cut off, it cannot be repaired.

All Wounds in the Bladder, Brain, Heart, Liver, Lungs Stomach, and ſmal Guts are deemed mortal.

The general *indication* in the Cure of Wounds is the *adjunction* of what is ſeparated, wherein the *Chirurgeon* ought to

to be furniſhed with five Intentions.

The firſt whereof is to extract all ſtrange Bodies, as *Bullets*, *Darts*, *Arrows*, *Splinters*, &c. if any do hinder the Wounds agglutination.

The ſecond, to bring the divided extremities together.

The third, to keep them ſo.

The fourth, to preſerve the wounded parts temperature.

The fifth to correct ſuch accidents as may fall out.

The firſt of theſe *intentions* is performed, either with the Fingers, or ſome material Inſtrument, at the firſt dreſſing, unleſs the extraction of the foreſaid things might occaſion an *Hemoragy*, or ſome other dreadful accident; for then the ſafeſt is to leave their expulſion to Nature: but ſince it may ſometimes not little be advanced by Medicaments, take this following deſcription.

Recipe, *The Root of Iris of Florence, of Panacis and Capers, of each three Drachms, round Ariſtaloch, Manna and Frankincenſe, of each one Drachm, beat them to a powder, and incorporate them with Honey of Roſes,*

and Turpentine of Venice, of each two Ounces. Make a Salve thereof.

The second and third *intention* in the Cure of wounds are performed in bringing and maintaining together their Extremities, by Bandages and Sutures; of the first whereof there is three sorts, namely,

1. The *Incarnative*, which is adapted to simple Wounds, and is composed of two heads, beginning from the part opposite to the Wound, and proceeding towards it.

2. *Expulsive*, which consisteth but of one head, beginning from the bottom of the Wound upwards to its Orifice.

3. The *Retentive*, which is destinated to fasten Topical Remedies, and is made according to the figure of the part which is to be bound.

There are several sorts of *Sutures*, but of the *Agglutinatives* the most approved is made with a needle held in the Right Hand of the Chirurgeon, wherewith he traverseth the two sides of the Wound, opposing a pierced Canulle, held in the Left Hand to the point of the Needle, which

which passeth through it, with its Thread, whereon is made a double knot, cutting the thread a little above it, and thence it is proceeded to the other stitches, remembring always to make the first stitch in the midst of the wounds length.

There is also another *Suture* called *Dry*, fit for wounds in the Face, and is made by clinging some pieces of Linnen upon it, which are, being dry, brought together with threads pierced through them.

The third necessary *Suture* is like to that, which Skinners make in sowing their Skins together, and is appointed for the Bowels and Gutts, when they receive any hurt.

The others I think needless to describe, these being doubtless the best, whereunto the ingenious Artist may add what he thinks fit.

The *temperature* of the affected part is preserved by a good Diet, and a convenient use of the Universal Remedies.

The first of these ought to be cold and moist, till the time obnoxious to accidents be passed. Spiced and salt meats

are hurtful; the Patient must drink Barley water, in stead of Wine; and wholly abstain from any violent motion of the mind.

The most usual universal Remedies are *Phlebotomy* and *Purgation*, which have virtue to refresh, divert and expel the humours, that might prove burthensom to the diseased part.

Amongst accidents, the most urgent is a too great flux of Blood, which must be carefully prevented, since it is the Treasure of Life and Strength.

It is performed by *astringent*, *refreshing*, and *agglutinative* Remedies: As,

Recipe, *Sealed Earth, and Bole Armenian, of each half an Ounce, Frankincense, Mastick, Myrrhe and Aloes, of each two Drachms, Flying Flower, one Ounce. Make a powder to be applyed with the Yolk of an Egg well beaten.*

If then Blood cannot be restrained in this manner, the *Vein* or *Artery* must be prest with the Thumb, till a *Thrumbus* be made; but if that sufficeth not, the flowing Vessel ought to be bound, and this yet

yet not prevailing, we are to uſe *Eſcarotides*; as are *Burnt powder of Vitriol, and of Mercury, with a portion of pure burnt Alum*, leaving the Scars full to mature.

The laſt Remedy is the cutting off the flowing Veſſel, that its Extremities, withdrawing in the Fleſh, the ſame may ſtop its flowing. But all theſe Remedies will doubtleſs come out of uſe as ſoon as the *Stiptick Elixir*, to be bought at Doctor *Williams*'s, his Majeſties Phyſitian, will be known.

Pain, being commonly the cauſe of much weakneſs and fluxion to the wounded part, the ſedation of it ought to be carefully procured by expelling and lenitive Remedies, ſuch as is the following.

Recipe, *Diacalcitheos Plaiſter, four Ounces, Oyl of Roſes and Vinegar, of each half an Ounce. Let all be melted together, and applyed. For Lenitive, Dip the Bands and Compreſſes in* Oxicraton (*Water* and *Vinegar* is ſo called) *or uſe the following Irrigation.*

Recipe,

Recipe, *Oyl of Roſes and Myrrhe, as much as needs, and with a white of an Egg make an irrigation.* But if the pain continueth and is too intenſe, we muſt with ſome precaution uſe *Narcoticks*, whereof here is a Deſcription.

Recipe, *The leaves of Henbane, and Poppy roaſted under the Aſhes, of each three Ounces, Hogs greaſe and Oyl of Roſes, of each one Ounce, Saffron two Scruples. Make a Cataplaſm.*

There is often joyned to pain another Symptom, called *Convulſion*, which is defined a forced contraction of the *Muſcles* towards their *Origin.*

It is of two ſorts,

General, and

Particular.

The firſt whereof is divided in three *Species*; namely,

Tetanos, when the whole Body ſtands ſtiff, without being able to incline it ſelf.

The ſecond is called *Opiſthotonos*, when it is forced backward.

And

And the third *Emprosthotonos*, when it is contracted forward.

A particular *Convulsion* is when the *Eye*, the *Tongue*, or any other part instructed with *Muscles* is contracted, or deprived of its natural motion.

The Causes are *Repletion*, *Emptiness* and *Pain*. *Paul Amanus* refuting the *Elastick* virtue of *Willis* and its defects.

That which is caused by *Repletion*, is cured by *Evacuating Remedies*, anointing the Back, Neck, and contracted part, with this following *Liniment*.

Recipe, *Oyl of Camomile and Laurel, of each two Ounces, Oyl of Foxes, one Ounce, the Salves of Althea and Martii, of each an Ounce, Foxes Grease, an Ounce, Strong Water, an Ounce and a half, Wax as much as needs. Make thereof an Oyntment.*

That which proceeds of *Emptiness*, or *Evacuation*, is helped by the use of restorative meats, such as is the following Broth.

Recipe, *Lettice, Bourage, Purcelane, of each a handful, of the four Greater cold Seeds*

Seed of each half an Ounce, Barberries a drachm. Boyl all with a good Chickin and let the sick party take of it every morning.

That which cometh of *Pain* is Cured by Remedies contrary to the cause of it, and if it be poysonous, the wound must be instantly amplified, that the matter impacted may flow. And this *Alexipharmacon* poured into the Wound, *viz. Treacle* and *Mithridate* dissolved in *Strong water*, in a sufficient quantity with a little *Mercurial Powder*. *Scarified Cuppings* are also very useful to extract venemous matter, taking care likewise that the Patient, in that *Symptom*, have not his Mouth fast contracted, lest he bites off his own Tongue, as it often falls out, but may conveniently be prevented, by an Instrument called *Speculum Oris*, which ought therefore alwayes to be at hand.

Next to *Convulsion*, a *Palsy* ought to be prevented, and cured.

It is defined, *A Mollification of the Sinews, with the privation of Motion and Sense*, not indeed of the whole Body, but com-

commonly of one ſide. Its *Cauſes* are either *inward*, as the humours of either *Ventricle*, and eſpecially *Phlegm* obſtructing the progreſs of the *Animal Spirits* through the *Sinews*; or *outward*, as *Falls*, *Blows*, and ſuch other *Accidents*.

It is Cured by *Diet* and *Purgation*, whereunto the *Decoction* of *Indian wood*, will be very profitable, with this *Topical* Remedy of *Faventinus*.

Recipe, *Oyl of Laurel and Turpentine, of each three Ounces, Oyl of Lavender, and Petroleum, of each an Ounce, Malveſie, four Ounces, Strong-Water two Ounces, Pyreth. Pepper, Muſtard-ſeed, Juniper ſeed, Ivy, and Anacardium, pure Laudanum, of each an Ounce and half. Let all be pounded and mixed with Wine and Olives, let them boyl in a double Veſſel till the Wine be conſumed, a ſtrong expreſſion being made, add Galbanum, Bdelium, Euphorbium, Myrrhe, Caſtoreum, Bear, Duck, and Storks Greaſe, of each two ounces. Make a Salve in the Form of a Liniment, whereunto a little Wax if needs be, may be added.*

Exerciſe and Frictions are alſo very powerful to awake the part affected, and cauſe the motive Spirits to flow in.

There

There is another accident, when the Patient either by weakneſs, proceeding from the loſs of Blood, poyſonous Vapours, or the ſight of dreadful Objects, falls into frequent Swounds.

It is diſcerned, 1. When *Paleneſs* invades the Face, with a *Cold Sweat*.

2. If a *Coldneſs* of the whole *Body* be perceived.

3. And if the Party do *ſuddenly Fall*, when it is in the *Paroxyſme*.

It is prevented by caſting cold Water in the Diſeaſed's Face; but if it proceeds from too great *Evacuation*, the Patient muſt be ſoftly *collected* on the Ground, or on his Bed, and a little *Bread* dipped in *Wine* given him to taſte, whereat the Spirits may return. But if it proceeds from *Poyſonous Vapours*, Let the Patient drink out of a Spoon a little *Treacle* and *Mithridate* diſſolved in *Wine*.

That which comes of *Fear*, is eaſily cured, the *Object* being removed, with encouraging and comfortable *Admonitions*.

The loſs of *Blood*, *Pain*, and *Feaver*, whereunto Wounds are ſubject, do often diſtract the Patient, in a temporary Phrenſy

Phrensy called *Delirium*, which is defined, *A temporary perturbation of the Phansy, and other mental Functions.*

Besides the Causes above mentioned, *poysonous Vapours*, and a *Lesion* of the *Diaphragme* do not seldom effect its *Production*; this last having a plain communication with the *Brain*, by the *Nerves* of the sixth *Conjugation.*

If it proceeds from an *Obstruction of the Spirits*, the same *Remedies* must be used, as when the Body is subject to *Swounding*, but if it coms from an *Inflammation of the Brain*, *Diet* and *Purgation* must be instituted, and the *Hair* being *shaved*, the *Head* being bathed over with *Exorodine*, applying upon it the Plaister of *Diacalcitheos* dissolved in *Rose-water* and *Vinegar*, and *Sleep* provoked by the use of *Broths*, wherein you must boyl refreshing *Herbs*, and a knot of *White-poppy Seed*; and pleasant Company, diverting the Patient from other sad thoughts and representations of mournful things, may also be very conducible to his health and recovery.

Of

Of Wounds made by Fire Armes.

THE Induſtry of men ever clear ſighted to their own deſtruction, having for about 200 yeares ſince, found out a very ſpeedy way to it, namely Gun-powder, and fire-armes; Whoſe hurts being often waited on by other accidents, it obligeth us to treat eſpecially of their Curation.

They are either ſimple or compoſed, with dilaceration, diſtemper, and tumor. Their ſigns are commonly a round Figure, little effuſion of Blood, a ſwelling of the part, and a greeniſh livid colour.

In the firſt apparel, the wound ought to be dilated, if the wounded parts conformation can permit it, that unnatural Bodies if there be any, may be ſought out and expelled with the matter. In doing which, if it be poſſible, the patient muſt be ſcituated, as he was when he received the wound. After the extraction of ſtrange Bodies, we muſt prevent pain and fluxion.

The *firſt* by the repelling and lenitive Reme-

Remedies above deſcribed, and the Cataplaſme appointed for its ſedation.

The *laſt* by Diet and Purgation, whereunto Clyſters are commonly uſed, leſt Cathaericks might cauſe too great an agitation of Humours.

Thence we muſt proceed to Suppuration, as in all other contuſed Wounds whereunto that which is called digeſtive and the following Oyl are moſt conveniently uſed.

Recipe, *Oyl of Violets, four pound, wherein boyl two young Cats, new brought forth, till the bones be looſed off, adding Earth-worms duly prepared, one pound. Let them boyl together on a ſlow fire, adding Turpentine of Venice, and ſtrong-water, three Ounces. To be kept in a Glaſs, till there be occaſion to make uſe of it.*

But if there be any danger of *Gangrene*, we uſe profitably of *Egyptiacum* diſſolved in *Wine*, *&c.*

When the wound is brought to *Suppuration* deterſive Medicaments muſt be applyed, ſuch as is the following.

Recipe, *Water of boyled Barley, the juice of Plantain, Parsley, Agrimony, and of the lesser Centory, of each an Ounce, let them all boyl together, and in the end of the Decoction, add Turpentine of Venice, three Ounces, Hony of Roses, two Ounces, flower of Barley, three Ounces, Saffron, one Scruple. Mix all together, and make a cleansing Oyntment.*

Lastly, having care to prevent other accidents according to Art, the Wound must be brought to a perfect Cure and Sanation.

Of Gangrenes.

BUT since *Gangrene* is often a concomitant of Wounds, made by *Fire-Armes*, and other *Contusions*, it will not be amiss here to expound its Nature, Signs and Curation.

It is defined, *The mortification of a part affected with inflammation.* And is only distinguished from a *Sphacelus* by the more

more or less, this last being only when the part is quite mortified and dead. The onely Remedy being then its *Amputation.*

The general Cause of *Gangrene*, is a corruption of the parts natural Heat, by Cold, external Heat, want of Nourishment, stopping of *Transpiration*, or by the dreadful effects of some poysonous substance.

Its proceeding is two-fold, either with some humours in flowing, or without it.

We have deduced the signes of it in the *Chapter* of *Impostumes*. And for its Curation, since that which hath its *origin* from the second cause is the most general, and may in some measure be a Rule for Curing the rest, Take these following Precepts.

If the Body be in the least *Plethorical*, *Phlebotomy* and *Purgation* being celebrated, the *Air* by Nature or Art, ought to be cold and dry, and the Patients diet of the same temper.

Amongst *Topical Remedies*, *Egyptiacum* boyled with some *Aloes* in salted Water, adding a little Strong Water in the end, is deservedly much esteemed; as also

the *Phadagenick* water, or the *Gray Salve*, which is made by adding a Drachm of corroding *Sublimate* to an Ounce of *Basilicon*, in the mean time, to defend the Body from the Influxion of *Morbifical Humors*, and putrid Vapours, the following defensive may be applyed on the diseased part, and often renewed.

Recipe, *Oyl of Roses and Myrtle, of each four Ounces, the juice of Plantain, Solanum, and Housleek, of each two Ounces, the whites of Eggs, five; Bole Armeny and Sealed Earth reduced in a subtil powder, of each an Ounce, with as much Oxycraton as is needful.*

If it be too *Intense*, and yeilds not to *Catharticks* and *Topical Remedies*, we are obliged to use actual *Causticks*. And *lastly*, if that will not serve, we must proceed to the part's *Amputation*, which the only approved *Remedy* in a *Sphacelus*; wherein observe, that to stop the effusion of Blood, actual *Causticks* are almost out of Use, the binding of the Vessels being found more commodious.

Of

Of that Operation, see *Fab. ab Aqua Tendente*, in his *Chirurgical Operations*; but now the *Stiptick Elixir* of Doctor *Williams*, overcomes all other *Remedies*.

Where Bones are discovered, they use the *Tincture* of *Aloes*, extracted with *Spirit of Wine*, and to fortify the part, they boyl *Aromatick Herbs* in *Red* Wine, *&c.*

G 3 CHAP.

CHAP. IV.

Of Ulcers.

ACcording to our intended ſcope this *Chapter* is dedicated to explicate the *Theorems* of *Ulcers* and the manner of *Curing* them.

They are defined, *Solutions of Continuity, cauſed by the Mordacity of corroding humours, rather hurting in quality than in quantity.*

Their external Cauſes are the exceſſes of cold and heat, for, as ſaith the Phyſicians Poet.

Sunt diverſa quidem mala frigoris atque caloris ;
Sed tamen amborum ſimili nocet Ulcere virus.

The pain of heat and cold are different,
To make an *Ulcer* yet they both conſent

Where-

Whereunto is added the appofition of harp medicaments, blowes contuſions nd the touching of impure things.

Their differences are expreſſed in the ollowing Diſcourſe.

An *Ulcer* is either,

I. *Simple*, Varying either by,

Firſt, Proper, differences, as

1. *Figure*,
2. *Quantity*,
3. *Quality*.

Whence it is termed,

Round,
Angular,
Strait,
Crooked,
Long,
Short,
Broad,
Deep, &c.

Or, *Secondly*, By differences *Common* and *Accidentary*. As

1. Its *Durance*,
2. *Aſpect*,
3. *Generation*,
4. *Affected part*. And thus they are,

New,
Old,
Appearing,
Hid,
Incult,
Burnt,
Fleshy,
Nervous, &c.

II. Or *Composed*, either with
First, A Diseases *Cause*, whence it is called,

1. *Cachochymical*,
2. *Cathartick*,
3. *Poysonous*, &c.

Secondly, A Disease it self, as

1. *Intempery*,
2. *Tumor*,
3. *Incommoderation*;

Hot or *Moist*, *Phlegmous* or *Erisipelous*, *Burnt*, *Callous*.

Thirdly, Its *Symptoms*, whence it is called,

Gnawing,
Filthy,
Painful, &c.

A gnawing (*Depascence*) *Ulcer* is discerned by the parts *exesion*, *attrition*, *cavity*

vity and *hollowneſs*. The *ſtinking* exhaleth a putrid, unpleaſant and cadaverous ſmell.

The *Sordid* is diſcerned by the craſſity, and viſcoſity of its Excrements, and the ſoftneſs of the fleſh overgrowing it, whereunto if a hardneſs of the lips be joyned, it is deſervedly termed *Fiſtulous*.

A *Cancrous Ulcer* is horrible to look on, its lips being overturned are hard, livid and moiſt. That which is called *Diſcrative*, is cauſed by the humours *Intempery*; And *Cacoethes* is ſo termed for the difficulty of healing it. The *Catherick* receives nouriſhment of ſome broken or dirupted Veſſel, or proceeds from an evil diſpoſition of the whole Body.

Ulcers having had their beginning during a Diſeaſe, or before it, growing *livid*, *pale* or *dry*, plainly indicate the proximity of Death, their *livid* or *pale* colour being not only the ſign of *Cholerick*, or *Atrabiliary* humours cauſing them, but alſo manifeſting an extinction of the natural heat.

That which renders the Cure of *Ulcers*

cers difficult, is commonly a penury of Blood, the Bodies evil constitution, as also that of the Air, the sordidness of the *Ulcer*, and the rottenness of some Bones.

In *simple Ulcers*, *Desiccation* is only required, and the breeding of flesh in them, whereunto the red desiccative Salve, and *Unguentum Aureum* are convenient.

But in *composed* ones, we must have an eye to the most urgent, then to the Cause, and lastly to the Disposition, without whose taking away, the *Ulcer* cannot be cured.

Pain is often an accident of *Ulcers*, whereunto must be provided as is declared in the *Chapter* of *Impostumes*, having a special regard to the humour causing it.

If there be any Bone corrupted, it must be touched with an actual *Caustick* of hot Iron, and such Remedies used to breed flesh in the *Ulcer* as are above declared, in doing which, two sorts of excrements do commonly appear, namely a thin matter, and a thick sordity, both which must be purged by drying and detersive Medicaments.

Where-

Whereof take that mentioned in the former *Chapter* : But ſublimate Water or the *Brown Salve* of *Felix-Wurts*, are more powerful.

Then the *Cicatice* muſt be induced over the *Ulcer*, to which end the powder of *Burnt Alum* and *Caleanthum*, are wont to produce ſpeedy and wiſhed Effects.

CHAP.

CHAP. V.

Of Fractures and Diſlocations.

A *Fracture* or *Bone breaking*, is an accident ſo dreadful, that not without cauſe the *Phyſitians* Poet being about to ſpeak of it, makes this deprecation.

Infandum dictu, cunctis procul abſit amicis,
Sed fortuna potens omen convertat in hoſtes.

That curſed evil light on none but Foes,
And Fortune keep our Friends from the like blows.

A *Fracture* is defined, *A ſolution of continuity in the Bones*; and its Cauſes are all ſuch things as may break, cut, bruiſe, and quaſh; whereby are alſo to be underſtood falls from high places, and the like. Their

Their differences are manifold; for some are termed *perfect*, others *imperfect*, some are *simples*, others *composed* with *hemoragy*, *inflammation*, *gangrene*, &c.

They receive a common difference from their figures, *long*, *transverse*, *strait* or *crooked*. Whereunto are added, that which is called in *Greek Raphanidon*, when the bone is broken short in two pieces; *Cariedon*, when it falls in small Fragments loose from one another; and *Asphitidon*, when it is ground small as meal or flower.

A *Fractures* existence is known by a vehement pain of the affected part, the impotency of it, the change of its natural Figure, and chiefly by the vacuity which appears to the fingers touching it.

For the *Prognostick*; in moist weather, and in youth *Fractures* are sooner healed than in dry weather and in old age; But the precise time of the over-growing *Callus* cannot be positively assertained, that depending of the Body's, and *ambient Air's* disposition, as also of the Bone's thickness. Yet *Hippocrates* saies, the *Nose* is glutinated in three days, the *Jaws*, the *Clavicles* and *Ribs* in six, the *Cubit* in nine, the

the *Brachium* in twelve, and the *Tibia* in fifteen; Which may be a Rule for the reſt.

When the Bones are broken near the Joynts, their motion is thereby rendred ſtiff, and difficult, and if there be great *Contuſions*, the part loſeth its motion, and the Patient is in danger of Death.

The Cure of *Fractures* and *Diſlocations* being in many reſpects one and the ſame, we ſhall ſpeak joyntly of them both in the end of this Chapter.

A *Diſlocation* therefore is defined, *The detruſion of a Bone out of its proper place.* And it is either *Simple* by it ſelf, or *Compoſed* with other Diſeaſes.

Its *Signes* are the ſame as thoſe of *Fractures*; the place of indiſpoſition and its Cavity being the chief differences; *Diſlocations* affecting but the Joynts, and cauſing but an imperfect *vacuity* in the *Diſlocated Place.*

If the *Head* be *luxated*, Death immediately follows.

Recent luxations are eaſier and ſooner cured than *Old* ones; thoſe that are *inveterated* are wholly incurable; and ſuch as are not far divided are eaſier reduced

duced in their Seat, than far ſeparated ones.

The common and general Cure of *Fractures* and *Diſlocations* is performed by,

1. Setting the Bones in their natural poſition.
2. Retaining them there.
3. Correcting the accidents.

The *firſt* of theſe is performed by extending the broken or diſlocated part from its *origin*, either with the Hands or ſome fit Inſtrument, then ſetting it in its due place ſo that no eminency or roughneſs be found to alter the figure of it.

The *ſecond* point is obtained by the application of reſtraining, and defenſive Plaiſters, whereof the moſt common is made of *Bolarmeni* dilayed in wine, and the *White of an Egg*; applying thereupon *Bands*, *Compreſſes*, and *Atelles* dipped in *Oxycrat*, or *Oxyradinon*, fitted to the figure of the diſeaſed part; And the Patient being in a convenient ſcituation the accidents muſt be corrected, as is declared in the former *Chapters*, according to the *Artiſts* beſt invention and dexterty.

If

If the accidents do not oblige us to it, 'twil be enough to looſen the *Bands* at the end of three or four days, that fuliginous Vapours may be exhaled, and the part a little anointed with refreſhing Ointments, taking care to give it ſometimes a gentle motion, leaſt the Joint be rendred ſtiff and immovable, by the growing of a *Callus* thereon, and thus being ſometimes lookt to, the Cure is brought to its perfection.

CHAP.

CHAP. VI.

Of the Generation and Production of Man.

HAving thus far proceeded on our intended ſcope, this *Chapter* ſhall briefly expreſs what is requiſite to be known in the *Generation of Man*, and the way of helping Nature in the *Production* of the ſame, as her chief-eſt work and maſter-piece.

In the *Generation of Man* is exactly to be conſidered,

1. The matter out of which he is engendred, and the Inſtruments of *Generation.*

2. The *Place* thereof.

3. In what *Time* it is *perfected.*

4. And by what *Signs* its Conception, difference of Sex, and approaching time of being brought forth is known.

1. The *Matter* of his Generation is the *Seed of both Sexes* (whereunto the *Menſtrua* were added by the *Antients*) proceeding from the pureſt Blood, diluted with a great deal of *Serum* (*Barbat. pag.* 49.) which is tranſmitted by (the *Inſtruments of Generation*) the preparing *Artery* to the *Teſticles*, that are nothing but a *Conglomeration* of *Spermatick Veſſels*, wherein the *Serum* is ſeparated from the *Blood*, that is wrought and elaborated in the *Epidydemos*, or production of the *Spermatick Vein*, incumbent on the *Teſticles*; whence it is carried through the *Paraſtates*, into the defering Veſtel, and thence into the Spermatick Veſſcles; and according to ſome, the *Proſtata's*, ending with them in the Conduit of the *Urethra*; where there is extant a *Valvul*, leaſt the *Seed* ſhould involuntarily flow through the *Yard*. The *Nerves* probably ſerving to render it fertile and vegetative by the effuſion of *Animal Spirits*.

There are almoſt the ſame *Spermatick* parts in Women, except their ſituation, and the Womb, the *Receptacle* of the *Seed* and *Domicil* of the *Foſter*; Yet *De Graaff* proveth that their *Teſticles* are as an

Ova-

Ovarium, containing perfect *Eggs*. Thus new Wonders are daily found in the *Microcosm*.

2. The *Place* wherein he is engendred is the *Womb*; the *Foster* being found therein commonly gathered in a round, and wrapped in two distinct *Membranes*, the *Amnios*, and *Chorion*, (the *Allantoides* being only found in Brutes) wherein the three or four first months it is nourished, not of the *Maternal Blood*, as the *Antients* conceived, but probably of the *Chyle*, transported by the *Lacteal Vein*, and the *Arteries*, to the *Placenta*, where it is further elaborated, and thence partly carried through the *Umbilical Vessels*, to the *Port Vein* of the *Foster*, whence it floweth into the *Cava*, and finally to the Heart. The other part being transmitted by the *Arteries* of the *Membranes* into the Capacity of the *Amnios*, constituting there the pure *Colliquamentum*, mentioned by *Harvey*, which the *Foster* sucks after the fourth month, for its sustentation.

3. By the *Time*, which we have said ought to be considered in the generation of Man, it is to be understood,

First, That of his *Conception*, when the Seed of both Sexes is mingled in the Womb.

Secondly, That of his *Formation*, which is thought to begin the *7th.* day, and to be perfected, if it be a *Male*, the *30th.* if a *Female* the *40th.* or 42. But it is more probable they are figurated about the same time, which cannot be so exactly determined.

Thirdly, No more than that of their *First Motion*, which was conceived, if a *Male*, to be in the *third Month*, and, if a *Female* in the *fourth.*

Fourthly, Neither can that of *Childbirth* be absolutely stated, the usual time being the latter end of the *ninth Month*, or the beginning of the *tenth*; though admit a *Latitude* from the *seventh Month* inclusively to the *eleventh* and above.

4. The chiefest Signes of *Conception*, are,

First, A little *Quivering* presently after *Copulation.*

Secondly, The *Retention* of the *Seed.*

Thirdly, The *Suppression* of the *Monthly Courses.*

Fourthly, A *Livescency* of the *Face.*

Fifthly,

Fifthly, A *Pain* and *Swelling* of the *Breasts*.

Sixthly, A *Diſtaſte of Meat*. Which *Signs*, or moſt of them appearing, one may judge of *Conception*, till a more certain one be diſcerned, namely the *Motion* of the *Foſter*.

5. Whether it be a *Boy* or a *Girle* is yet more uncertain; though ſome would conjecture by the following *Signs*.

If it be a *Boy* the *Mother* hath uſually a better *Colour* of the *Face*, and *diſpoſition* of the *Body*, the heat and good temperature of the *Child* adding ſomething to that of the *Mother*; for which Cauſe alſo they ſometimes powr a drop of the *Milk* upon a *Looking-glaſs*, or ſuch other even thing, and if it be of ſuch thickneſs as not to flow eaſily, they deem it to be a *Manchild*, otherwiſe not, the time of *Motion*, as is ſaid before, *indicating* nothing in this.

6. The *Signs* of approaching *Childbirth*, are a *ſmart Pain* from the *Navel* downwards and thence reflected to the *Vertebra's* of the *Loines*, though the *Moderns* deny their diſjunction from the *Os Sacrum*.

The flowing of the *Excrementitious Humours* contained in the *Chorion*; the *Flanks* and *Rump* are thrust outwards; the *Secret parts* do swell and pain; the *Face* grows *Red*, a kind of feverish quivering seizeth the whole *Body*.

These *Signs* appearing, if the *Chirurgeon* be called, he ought then to prepare all things ready, and exactly observe what is to be performed,

1. Before the *Birth*.
2. In *Bringing forth*.
3. And *after* the *Birth*.

1. Before the *Birth* a special care must be had, that the *Air* of the *Room* must be *duly tempered* with a *moderate heat*, and then the *Woman* must be setled in a convenient and middle posiure, so that she neither lie flat on her *Back*, nor be yet sitting, but have her *shoulder* and *Back* something raised, that she may have a free respiration, and more powerful endeavour to bring forth, her *Leggs* being as much separated as may easily be, and so bowed that her *Heels* may reflect to her *Buttocks*, which should also be something raised, she holding her self to a Staff fitly disposed cross the Bed, for that purpose, and

when

when she feeleth the most pain, she must be admonished to strive, as much as she is able, stopping sometime her Breath to express her *Foster*, whom the *Midwife* ought in the mean time to thrust gently from above downwards, having though a care not to put her in that labour before the time be come, least her Forces might leave her when they should be most needful.

2. In the *Birth*, it is to be considered, *If it be according to Nature*, which is when the *Foster* issueth forth instantly after the *Waters*, either the *Head* foremost or the *Feet*, all other manners rendring the *Birth* difficult, and being deem'd *against Nature*; But if the *Birth* succeedeth happily, the *Chirurgeon* ought to leave the delivering of the party to the *Midwife*, who ought to proceed in this manner; The *Child* being brought forth she ought presently to let follow the *Secundine*, but if they do not instantly succeed, she must gently thrust her *Hand* anointed with Oyl, or the following Oyntment, along the *Navel* in the *Womb*, and draw them out.

The said Ointment is composed in this manner.

Take Oyl of Lin-seeds, one Ounce, Oyl of Castor, half an Ounce, Nutmeg, three Drams, Laudanum, one Dram, and make a Liniment thereof.

And then free the *Child* of them, to that end, the *Midwife* must bind the *Navel* with a double thred two thumbs breadth from the *Belly*, neither too strait nor too loose, for fear of Accidents. The knot being firly made, the *Navil* must be cut two fingers breadth beneath the knot, and a linnen cloth dipt in Oyl of *Roses* or of *Almonds*, wrapped about it, with another linnen yet over, least its coldness, till the time of its falling off, might cause the *Child* some pain and inconvenience.

And thus far ought to be proceeded in the *Birth*, when it happeneth without extraordinary difficulty.

But because a *Chirurgeon* is seldom called unless the *Birth* be difficult, here followeth the Method, which he ought to observe therein.

The *Birth* is rendred difficult chiefly by two Reasons.

First,

First, When the *Waters* which ought immediately to precede it, are evacuated too long before, whereby the *Womb* groweth dry and intractable, which is to be remedied by the following *Liniment*, wherewith the *Midwife* ought often to anoint the *Natural Parts*.

Take freſh Butter without Salt, waſhed in water of Mugwort, Mucilagines of Figgs, of Lin. Oyl, and of Althea, extracted with Water of Sabina, of each half an Ounce, Oyl of Flower de Luce, an Ounce, make a Liniment.

The following Powder is alſo eſteemed for haſtening *Child-birth*.

Take Cinnamon, Caſſia fiſtula's bark, and Dictamel, of each a Dram and a half, and as much as the whole of white Sugar, make a ſubtil Powder thereof, and let the labouring Woman take half an Ounce of it at a time, in a decoction of Lin-ſeed or White-wine.

The following Drink is alſo much eſteemed for the ſame purpoſe.

Take

Take broken bark of Cassia fistula, two Ounces, Red Peaſe half a handful, Boyl them with as much white Wine and Water as needs, add in the end two Drams of Sabina, and make a decoction; In the Colature add for each doſe a Dram of Cinnamon, and ſix grains of Saffron, which being taken, provoke the party to ſneeze, putting in her Noſtrils a little pulverized Pepper, or white Hellebore, and cauſing her, as aforeſaid to ſtop her mouth and Noſtrils.

The *Second* and chiefeſt reaſon rendering the *Birth* difficult is the diſcommodious Figure of the *Child*, coming forth otherwiſe than the *Head* or *Feet* foremoſt, which being perceived, the *Chirurgeon* ought to ſettle the Patient in a convenient manner (as before) and then gently bind her with a broad and ſoft fillet (*Faſcia*) in this manner; The ſaid fillet muſt firſt be applied to the *Neck*, and thence brought croſs-wiſe before over the *Shoulders* to the two feet, where being again croſſed, and in many folds about the *Leggs* and *Thighs* it ought to be conveyed thence again to the *Neck*, and there

there be firmly bound, ſo that the party can in no wiſe ſtir, and to procure it the better, ſhe may ſet the plants of her *Feet* againſt the Beadſtead, a couple of honeſt Servants keeping her *Knees* as much from one another as may eaſily be, this being ſo diſpoſed; to keep out the Ambient Air, and to perform the Operation more modeſtly, a warm double linnen cloth may cover the *Natural parts* and *Thighs* of the Labouring *Woman*, and the *Chirurgeon*, having firſt cut his *Nails*, and anointed his *Hand* and *Arm*, with the aboveſaid Liniment, muſt by degrees gently as may be, thruſt it into the *Womb*; where having explored the poſition of the *Child*, and whether it be alone or with another, or a *Mole*, he ought to turn it ſo, that he may come out the *Head* or *Feet* foremoſt, as aforeſaid.

But if this do not ſucceed, or that the *Child* be dead, which is judged, when neither the *Chirurgeons* Hand, nor the *Mother* can perceive it to move, and moſt ſure if the *Waters* are *flowed out*, and the *Secundines* are *come forth*.

Then he ought to proceed in this manner, having found one of the *Feet*, he

he ought to draw it out, and having bound it about with a ſoft and broad fillet, put it in again, then ſeek the other, which having found, draw it alſo out with his hand, and together with it, by the fillet, that which was bound before, then having drawn the *Child* out to the *Flank*, one of the *Arms* muſt be retruded along the *Neck* over the *Head*, the other being along the ſide, and ſo muſt be endeavoured to be drawn out.

It happeneth ſometimes that one of the *Hands* doth appear and is thruſt out, which muſt inſtantly be thruſt in again, and the *Child* turned to a more commodious figure; but if the *Womb's Orifice* be ſo ſwelled that this cannot be done, chiefly if the *Child* be dead, the moſt convenient is to cut it, the *Bones* as deep in the *Fleſh* as may be, leaſt it might hurt the ſaid *Orifice* of the *Womb*, and then ſo turn the *Foſter*, that it may come out as aforeſaid.

But if the dead *Child* be ſo ſwelled either by *Tumor* or *Winds*, that it cannot poſſibly come out, then a *Hook* muſt be ſtruck, if the *Head* be ſwelled under the *Chin*, in the *Mouth*, in the hollow of the *Eyes*,

Eyes, or best of all in the *Pole*, if the *Breast* under the *Claviculis*, and if in the *Belly*, in the *False Ribbs*, or in the *Bowels* above the *Navel* (*Pubis*) specially if the *Child* cometh with the *Feet* foremost; Others do endeavour to cut the *Foster* in pieces in the *Womb*, with a crooked Knife and then extract it by pieces apart, in doing which, or the other operation, if it should happen that the *Head* alone should remain in the *Womb*, a double *Hook* or an Instrument called by *Pareus*, a *Gryphins Foot* must be thrust in, with a hollow *Hand*, and struck into some part of the *Head*, as aforesaid, drawing it gently forth; and thus far can Art be extended in the *Birth*.

After the *Birth*, ought to come in consideration, what must be done first to the *Mother*, and then to the *Child*; For the first, she must be exactly kept from all cold and ambient *Air*, which to obtain more surely, it will not be amiss to keep her *Leggs* some time a Cross, for so the divided parts will besides, be the sooner conjoyned, else ought she to be wrapped with a broad *Fascia* over the *Epigaster*, to the excluding of *Air* and

Blood

he ought to draw it out, and having bound it about with a ſoft and broad fillet, put it in again, then ſeek the other, which having found, draw it alſo out with his hand, and together with it, by the fillet, that which was bound before, then having drawn the *Child* out to the *Flank*, one of the *Arms* muſt be retruded along the *Neck* over the *Head*, the other being along the ſide, and ſo muſt be endeavoured to be drawn out.

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Eyes, or beſt of all in the *Pole*, if the *Breaſt* under the *Claviculis*, and if in the *Belly*, in the *Falſe Ribbs*, or in the *Bowels* above the *Navel* (*Pubis*) ſpecially if the *Child* cometh with the *Feet* foremoſt; Others do endeavour to cut the *Foſter* in pieces in the *Womb*, with a crooked Knife and then extract it by pieces apart, in doing which, or the other operation, if it ſhould happen that the *Head* alone ſhould remain in the *Womb*, a double *Hook* or an Inſtrument called by *Pareus*, a *Gryphins Foot* muſt be thruſt in, with a hollow *Hand*, and ſtruck into ſome part of the *Head*, as aforeſaid, drawing it gently forth; and thus far can Art be extended in the *Birth*.

After the *Birth*, ought to come in conſideration, what muſt be done firſt to the *Mother*, and then to the *Child*; For the firſt, ſhe muſt be exactly kept from all cold and ambient *Air*, which to obtain more ſurely, it will not be amiſs to keep her *Leggs* ſome time a Croſs, for ſo the divided parts will beſides, be the ſooner conjoyned, elſe ought ſhe to be wrapped with a broad *Faſcia* over the *Epigaſter*, to the excluding of *Air* and

Blood

Blood, remaining in the *Womb*, and then take the Broth of a *Capon*, or a piece of roasted *Bread* dipped in good *Aromatick Wine*, besides, specially in *Winter*, the *Secundines* may be applied to the Region of the *Womb*, and in *Summer* the *Skin* of a *Sheep* newly flaid to the whole *Belly* and about the *Loynes*, which must be taken away about six hours after, the *Patient* having rested that time, and the *Hippogaster* must be anointed with the following *Oyntment*.

Take Sperma Ceti, two Ounces, Oyl of sweet Almonds and Hypericon, of each an Ounce and half, Goats Suet, an Ounce, Oyl of Mirrhe, an Ounce, and Virgin Wax as much as needs; Make an Ointment to be used twice a day.

About the *Navel* may be applyed a Plaister of *Galbanum* with some grains of *Zibet*, *Muscus*, in the middle, and about the whole belly *Gaulbiers Cloth*, described by *Ambrose Parry*.

But if the Patient be much tormented with Wind, the following Powder is esteemed excellent.

Take

Take preſerved Anniſeed, two Drams, Nutmeg and burnt Harts-horn, of each one Dram and a half, Dates-ſtones, three Drams, Aloes, Wood and Cinamon, of each two Drams; make a ſubtil Powder, whereof give her one Dram in a Cup of warm White-Wine.

As for the Child, as ſoon as the ſame is brought forth, it ought to be cleanſed from all impurity,

with Oyl of Roſes, or of Myrtle, which ſome do with warm Water, and ſome aſtringent Wine, and then anoint the Child with the ſaid Oyls, taking ſpecial care whether the Child be not infected with a Chalky Matter in the Mouth, which is called the White Canker, for then it muſt be carefully cleanſed with a little clout faſtned to a ſtick, and dipped in a compoſition of Oyl of Sweet Almonds, Honey and Sugar, then having explored whether there be no vice in the conformation or conſtruction of the bodies parts (for if there be any, it muſt be maturely corrected) the Child muſt be gently ſwadled, and laid in his Cradle. If

If the Mother, or a Nurse will have her Milk stancht,

Take Oyl of Roses, and of Myrtle, of each three Ounces, Rose-Vinegar, one Ounce; mix them together, and anoint therewith her Breasts four times a day, and after the anointing, spread them over with Powder of Myrtles, applying thereupon the following Plaster.

Take Powder of Mastick and Nutmeg, of each two Drams, of Cypress-Nut, three Drams, of Myrtle and Wild Granate Flowers, of each one Dram and a half, Ireos of Florence, half an Ounce, Oyl of Myrtle, three Ounces, of Venice Treacle, two Ounces, and Virgins Wax, as much as sufficeth.

Some take a Spong dip'd in the decoction of Cumin Seed or Coriander laid in very strong Vinegar, and apply it to the Breasts as a secret.

Both may be much furthered by applying setting Cups between the Thighs,

Thighs, and on the Sides of the *Umbilick.*

As for the Reſt, which is but little acceſſary to the *Doctrine of the Generation of Man*, the *Reader* is remitted to thoſe, that have treated ſpecially thereof, as *Capuraeins, Pareus*, &c.

I CHAP.

CHAP. VII.

Of the Venerean Diſeaſe.

THE juſt puniſhment of God upon our ſins hath for ſome hundred years ſince, produced a *Diſeaſe* unknown, as ſome think, to *Antiquity*, called the *Venerian* or *French Pox*, which may be defined, *An Indiſpoſition compoſed of all other Diſeaſes and their Accidents, engendred by a contagious touch, but moſt commonly by impure Copulation, whence the Seed of ſeveral Men Fermenting, ariſeth a Venenous either fixt, or volatile acid Salt, having uſually its ſeat in groſs and viſcid Flegm, whence it proceeds to the Invaſion of the other Humours.*

It is divided according to its time and progreſs, in

Particular, and
Univerſal.

The *firſt* degree of the former being when

when there appeaes *Venerean Ulcers* and *Cancers.*

The *ſecond*, when there is a Virulent *Running of the Reins.*

The *Univerſal* is, when the Virulent *Salt* ſpreads it ſelf through the whole *Body*, and infects moſt of the parts thereof.

Its *Signes* are, an intenſe and vehement *Pain* of the *joynts*; *Ulcers* in the *hidden Parts*; An *Inflammation* of the *Mouth*; *Puſtles* over the whole *Body*, and ſpecially on the *Forehead*; *Laſtly*, *Knobs* and roughneſs of the *Bones*, and a *falling off of the Hair*, with other Accidents.

If the *Diſeaſe* be *Recent*, and the *Body* in *Youth* or *young Age*, the ſeaſon of the Year being favourable, the *Cure* is eaſily performed, but if the *Diſeaſe* be *Inveterate* and *complicated* with many *accidents*, if the *Patient* hath in vain been under *Cure*, and begins to be *extenuated* by a *Conſumptive leanneſs*, proceeding from a *Diſſipation* of the *Natural Moiſture*, the *Diſeaſe* muſt be eſteemed *incurable*, and only tried to be *palliated.*

The *Cure* of it is performed in *four* manners; Namely,

1. By the Decoction of *Guaiack wood*, *Sarsaparilla*, *China Root*, and *Sassafras*, which is the gentlest way, and fittest for the first degrees.

2. By *Unction.*

3. By *Plaisters.*

4. By *Suffumigation*, rejecting that of taking *Mercury* inwardly, as noxious.

The *first* is thus reduced in *Act*, *A pound of Guaiac being cut in small pieces, is decocted in Balneo Mariæ, with eight pounds of Conduit Water, to the dissipation of the third part, and in the end some Cinnamon being added to it, the Patient must take of it something warmed, five or six Ounces at his usual Meals, keeping himself afterwards very warm, to provoke sweat, which must be instantly wiped off; And thus using a very spare Diet, the same method must be continued, as long as the Patients forces can with facility suffer it.*

The *second* manner is more effectual, if the *Disease* be *Recent.*

The Body being well disposed and prepared, the Patient is shut up in a warm Chamber,

ber and Closet, and the Friction being begun, proceed from those parts which pain less, to those that are more painful, and having a special care to the quantity of Medicaments whereof the Indication is drawn from the Temper and Strength of the Patient, the Joynts and Emunctories of the noble parts are usually anointed with the following Liniment.

Take prepared Quicksilver, six Ounces, Sublimate half a Dram, quick Brimstone, half an Ounce, fresh Porks grease, one pound, the yolks of three Eggs, Oyl of Laurel and Turpentine of each two Ounces, Old Treacle and Mithridate, of each half an Ounce, let a Liniment be made according to Art.

But I rather approve *Mercury* alone, mixt with Hogs grease, since it doth not expel the *Material Cause* of this *Disease*, by any *occult* or *specifick virtue*, needing *Correctives*, but only by its motion, joyning naturally it self with all *acid moisture*, and, as *Mercury* dissolved in the *Spirit* of *Nitre*, or *Aqua Fortis*, corroding the mouth and opening the V-

ſels whence the Humors flow, till their *acidity* be evacuated.

But before the *Friction*, the *Body* muſt be judiciouſly prepared, for if dry ſubjects be not ſufficiently *humected*, the heat of the *Stomack ſublimates* the *Mercury*, whence proceeds a *Diarhæa*, with *Gripings* of the *Gutts*, and if it be ſtopt, there follows a *Conſtipation*, a *Feaver*, *Inflammation* of the *Throat*, or a *Phrenſy* with *Convulſions*, and ſometimes the party becomes *Deaf*, *Blind*, &c.

Contrariwiſe if *Moiſt Bodies* be not well exſiccated by *Sudorifick Decoctions*, the *Mercury* draweth with him to the *Throat* a great quantity of *Humours*, with ſwelling of the *upper Parts*, *looſeneſs* of the *Teeth*, *Exulceration* of the *Mouth*, and too great a *Flux of Blood*.

The *Diarhæa* is aſſwaged by the decoction of *Guaiac*, mixt with a little White-Wine, and taken for ſome days in the Morning, whereby the humours *Acrimony* is mitigated and ſweetned.

But in general thoſe evils are remedied by changing of Chamber and Linnen, precipitating the *Mercury* downwards by aſtringent *Gargariſms*, and *Clyſters*.

Clysters, by letting Blood in the Foot, and chiefly by purgations, wherein some Salt of *Tartar* must always be added, to sweeten and drive down the Humours.

Some do often swallow a *Golden Pill*, which becomes white, but it carries away the *Mercury* in so little quantity, that the other Remedies are not therefore to be omitted.

The end of Friction is to stimulate a *Chrisis*, which doth not proceed from Nature, without it be provoked and helped by some Medicament, whose quantity ought to be adapted to the vehementness of the Disease, and forces of the Patient; least the Medicaments being too strong, they cast him into an incurable *Consumption*, or being too weak, they do not eradicate the Disease, which afterwards is found much more intense, and incurable than before.

The third Cure is by Plaisters, and Cerowins, and is something slower than the former, but more convenient in Relapses, and for the mitigation of pain, and the resolution of

knobs and hardneſs, but becauſe it doth not act ſo ſpeedily, the beſt of Artiſts do joyn to it ſome Frictions. Beſides the Plaiſters of *De Vigo*, the following may be profitably uſed and applied on the parts mentioned in the Article of Friction.

Take of Melilot Plaiſter, and Saffron-Vinegar, of each half a Pound, Quenched Quick-Silver, ſix Ounces, Oyl of Laurel and Land Lavendel, as much as needs; Reduce all to the form of a Plaiſter.

The Scope of this Remedy, as of the former, is the procuring of a *Criſis*, either by inſenſible tranſpiration, *Flux* of the *Belly*, or *Urines*, but oftner and better by a flowing of the *Mouth*, which with the Gums and Cheeks is thereby as aforeſaid, often exulcerated, becauſe of the Humours Tenacity and Acrimony, and theſe *Ulcers* muſt by no means be repelled, but be mitigated by *Gargariſms*, compoſed of Decocted Barley, Cows Milk, and the like; which may diminiſh

niſh the mouths inflammation, and waſh off the Humours ſticking to it; but if this accident, as it happens ſometimes, be too intenſe, that it threatneth an extinction of the natural heat, we muſt for ſome time defer the proper Cure to cohibit ſo pernicious a Symptom, according to Art. As for the Teeths looſneſs, it is cured by aſtringent Gargariſms, but more powerfully if the Gums be touched with *Aqua ſecunda* of the *Goldſmiths*.

The fourth manner by *Suffumigations* is not ſo much approved, becauſe of many evil diſpoſitions, which it leaveth in the Body. They nevertheleſs thus proceed to it; The Patient being ſeated under a Curtain, well and carefully extended, they caſt in a Chaffing-diſh a good quantity of perfume compoſed of *Cinabre*, mixt with *Brimſtone* and *Quickſilver*, whereunto is added *Iris* of *Florence*, *Frankinſence*, *Mirrhe*, *Juncus odoratus*, *Aſſa odorata*, *Terebenthine* and *Theriak*, and continue this *Suffumigation* till the Mouth begins to flow; and that is its *Criſis*.

This Diſeaſes Symptoms are ſo manifold

fold, that I think fitter to remit the *Reader* to such *Authors* as treat of it at large than to say but a part of what is needful to be known, though most may be referred to the General Cure of *Impostumes.*

CHAP. VIII.

Of some other Indispositions which are Cured by Chirurgery.

HAving thus far proceeded, we are to treat in the present *Chapter* of some other *Indispositions* cured by *Chirurgery*, whereof some requiring an experienced Artist, others yielding themselves to the meanest Capacities, and this little *Treatise* being written only for the use of discreet Beginners, we shall only speak of the following.

Of Baldness.

Baldness is a falling off of the *Hair* from the *Head*, caused either by defect of *Nourishment*, or the corruption of it; That which proceeds from *Old Age*, the *Hectick*

tick Feaver, *Burnings* or *Tinea*, is incurable; But that which may be cured is thus proceeded unto. The *Universal Remedies* being fitly instituted, the remaining *Hair* must be shaved, resolving *Fomentations* used, and having caused the vitious humours to be digested by the application of *Cups* and *Leeches*, the *Head* must be washed in *Lye* made of *Iris*, and *Aloes*; lastly, drawing Fomentations must be ministred, for the attraction of laudable Vapours. If it be caused by want of nourishment, the Head must be rubbed with a course Linnen Cloth, till it grows red, and if it proceeds from the *Venerean Pox*, the body must be anointed with Quick-Silver to a perfect salivation.

Of the Eyes.

The *Eyes* diseases are manifold but their inflammation is the most common; their causes are External, as *Falls*, *Blows*, *Dust*, *Smoke*, &c. or internal, namely a *defluxion* flowing to the *Eye*. It is known by the heavinels of the Head, the Eyes redness, pain, swelling, and pulsation of its Arteries. It is cured by the same administration of universal

Reme-

remedies as in *Phlegmons*, and the due application of Topical ones, whereof this Collire is of a perſpicuous effect.

Take Roſe and Plantain Water, of each half an Ounce, the mucilage of Gum Tragacant, two Ounces, and the White of an Egg; make a Collire to Diſtil luke-warm in the Eye, applying upon it a double Linnen Cloth dipped in the ſame Collire.

The Blood of Doves, Pigeons, or Hens inſtilled warm in the Eye mitigates the pain of it, and is its proper Balm. But if a Relapſe is feared, Cups applied on the Shoulders, and an Iſſue in the Pole are very fit to divert the Fluxion.

Tooth-ach.

There is ſcarce any pain equal to that of the Tooth-ach. It proceeds from the influxion of a hot or cold humour, or the Tooth being hollow or rotten, from the entrance of ambient Air, and the refrigeration of cold Meat, or Drink.

The Internal cauſes are taken away by a due adminiſtration of Univerſal Remedies, and if the pain proceeds from a hot

a hot cauſe, which is known by its ſharpneſs and a great pulſation of the Tooth and Temples, it is mitigated by remedies contrary to it, as to waſh the Mouth with *Granate juice*, *Plantain water*, and a little *Vinegar*, all being boiled with *Roſes*, *Wild Granate* Flowers, and *Sumach*. If the Cauſe be the fluxion of a cold humour, which is diſcerned by a heavineſs of the Head and frequent ſpitting; the Teeth are profitably waſhed with *Garland-Libanotis*, *Sage Pierethre* decocted in *Wine* and *Vinegar*, whereunto is added a little *Srong-Water* and diſſolved *Treacle*. But if it proceeds from a rottenneſs of the *Tooth*, there is no better remedy than the drawing of it, and if it be but a Root, procure the corruption of it by a *Cotten* dipt in *Aqua-fortis*, having firſt tried the *Odontalgick Eſſence* of *Flubault*.

Of Phlebotomy or Blood letting.

Phlebotomy being an Operation neceſſary to be known of a beginner in *Chirurgery*, I have thought fit to ſay here ſomething of it. They define it, *An Inciſion of the Vein, evacuating the Blood and the other Humours contained with it.*

Befon

Before it be administred, if there be any *Excrements* remaining of the former *Coction*, they must be evacuated by a *Clyster* or *Suppository* and thus when necessity requireth, or for precaution in persons neither too old nor too young, *Phlebotomy* is celebrated in the following manner.

The Patient being conveniently scituated, the *Chirurgeon* rubs the part, which is to be opened with his hand or a warm Linnen cloth, to cause the *Bloods attraction*, then the said part is bound with a *Fillet* a little above the place of *Incision*, which is designed by a touch of the Nail, and the *Operation* is performed with a fit *Lancet*, limiting its evacuation to the strength of the Patient and the curative intention. *Lastly*, the *incised* place must be carefully bound, least an *Hemoragy* might happen.

Of Cup-setting.

When the matter is conjoyned and impacted, *Cupps* are commonly applied. I have commonly thus seen some proceed to operation, having something rubbed the *destinated place*, they set on it some kindled ends of *Wax Candle* fastened

ed

ed on a *Counter* or ſuch other thing, and over it apply the *Cup*, which then draws very powerfully the *Humours* up; then taking them off, *Inciſions* are made in their circle with a *Lancet* or *Inſtrument* called *Scarrificatory*, and they are again applied in the ſame manner as before, laying afterward Plaiſters of *Diapalma*, or *Album Raſis* over the *Inciſions*, till they be *agglutinated*.

Of Leeches.

Where *Blood-letting*, or *Cup-ſetting* cannot be performed, *Leeches* are commonly applied either by making a little *Inciſion* in the skin, or anointing it with a drop of ſome other *Blood* or *Sugard milk*, for then they will ſtick faſt, and when you will make them eaſily fall off, touch but their head with a little *Aloes*, or *Salt*; and if you will know what quantity of *Blood* they have drawn, lay them in the things aforeſaid, and they will revomit it; beſides if you will have them to draw more than their capacity is, cut their poſteriour part, when they are well faſt, and the *Blood* will run through

through their Bodies, which alſo is ſtanched, if it flowes when they are taken away, by the half of a *Bean* or ſome *burnt Linnen* applied on the little wound.

Thus I finiſh, and if the *Reader* takes this ſhort *Treatiſe* in good part I have my Deſire, and

END.